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ABSTRACT

This report, addressed to sponsors and partners of the Eisenhower consortia and clearinghouse network as well as the staff of those organizations, contains the evaluation summary report of the National Network of Eisenhower Regional Consortia and Clearinghouse. It summarizes network outcomes over the 5-year period between 1995-2000. The report includes a network evaluation and highlights of findings in the areas of training and technical assistance, dissemination, and collaboration and networking. Appended are: Evaluation Methods; Client Interview Protocol; Audit Report on Interview Methods; Sample CCDDS Record Form; OERI Performance Indicators for 2000; and Cross Reference of Interview Vignettes with the Indicators. (MM)

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ED 463 142

National Network of Eisenhower Regional Consortia and Clearinghouse:

Supporting the Improvement of Mathematics and Science in America's Schools

EVALUATION SUMMARY REPORT FOR 1995-2000

WITH IN-DEPTH EVALUATION OF TRAINING AND TECHNICAL ASSISTANCE, DISSEMINATION, AND COLLABORATION AND NETWORKING SERVICES

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June 8, 2001

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Executive Summary

The National Network of Eisenhower Regional Consortia and Clearinghouse has become a dynamic local, regional, and national school improvement support system for mathematics and science. Funded in 1992 by the U.S. Department of Education (ED), Office of Educational Research and Improvement (OERI) to help improve mathematics and science education throughout the Nation, each of the ten Eisenhower Regional Consortia serves an ED regional educational laboratory region. They are assisted and supplemented by the Eisenhower National Clearinghouse (ENC) located at The Ohio State University. The working relationships and infrastructure that ENC and consortia have built with each other and hundreds of partners across the country have produced a mechanism for effectively delivering services and products to extend mathematics and science reform.

The consortia are specifically charged to: (1) provide technical assistance for the implementation of teaching methods and assessment tools for use by elementary and secondary students, teachers, and administrators; (2) disseminate exemplary mathematics and science educational materials; and (3) build networks among mathematics and science resources within their regions and nationally. The clearinghouse collects, describes, and disseminates K-12 mathematics and science materials on an extensive scale nationally. The consortia and the clearinghouse, individually and as a collaborative network, conduct an intensive internal evaluation to document and assess their activities and impacts, and, just as importantly, to provide information for strategic decision-making. This internal evaluation effort has been supplemented by several third-party evaluations sponsored by ED and reported separately.

A. Network Evaluation

This evaluation report focuses on the results of in-depth interviews conducted in Fall 2000 to determine the impacts of training and technical assistance, dissemination, and networking and collaboration activities. It includes summary descriptive information of Eisenhower Network services, products, and partnerships over the 1995-2000 five-year period. It also describes outcomes in terms of the OERI performance indicators, as required by funding regulations. The primary data sources are a Consortia and Clearinghouse Descriptive Data System (CCDDS), which documents all activities in terms of content and participants, and surveys and interviews, which gather qualitative assessments from clients. These data sources are part of the internal evaluation procedures.

B. Highlights of Findings

This five-year evaluation shows that the Eisenhower Network has provided substantial support for improvement in mathematics and science education to educators across the country. The Network focuses on three major service areas: training and technical assistance, dissemination, and network-building. Over the five years, services were delivered principally through 169,798 in-person client contacts and 72,491,957 contacts using print and Internet media.

1. Training and Technical Assistance

The CCDDS documented large-scale client participation in training and technical assistance services. There were 147,271 contacts with clients through in-person consortia training and technical assistance activities during the 1995-2000 grant period. These services focused on local schools: approximately three-fourths of the clients worked in schools, and most of these were teachers. The Network intended to increase the intensity of these experiences for participants

over the years, and the proportion of activities that exceeded 12 hours in duration increased from 39 percent in 1998 to 51 percent in 2000.

Clients rated the quality and impact of these services highly through surveys. At least 97 percent reported that the technical assistance was aligned with state and national standards. Over 91 percent reported improvements in practice as a result, and over 89 percent reported improvements in student performance. In addition, at least 70 percent of the participants were from high-needs schools, a key focus of the Eisenhower Network.

Recent in-depth client interviews have reinforced these findings. For example:

> The consortium staff was able to demonstrate and model effective practice by working individually and collectively with teachers to give them a better understanding of how to use manipulatives in the teaching of math. That is the type of environment I think makes for helping at-risk students in their growth.
>
> Elementary Principal

> I received the Connected Mathematics Project training provided by the consortium. The professional development was phenomenal. One professional development program we went to was two and a half days, 18 hours of high energy. It was packed with neat things you could take back and use to engage your kids. You just wanted to start the next week and go!
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> Math Teacher

> Certainly students' academic achievement is enhanced. Last year was the first year, and I know it's partly because of my involvement with the consortium and my study group that I'm seeing these improvements in students' performance. Our building scored the highest on the state science tests out of all six elementary schools in our city. My kids, for the first time in years, couldn't wait to get to science class!
>
> Elementary Teacher

2. Dissemination

Widespread and effective dissemination of high-quality materials was documented. In all, 72,491,957 contacts with clients were recorded in dissemination activities over the five years. This includes 2,423,754 contacts through print materials, 67,350,561 through Web sites, and 2,717,642 through electronic listservs. The Eisenhower Network met and exceeded its goal of ten percent increases in these combined media contacts each year.

Clients rated the quality of the products highly, as demonstrated by survey results. At least 68 percent of the responding clients indicated that they used these resources and that they were of value to their work.

The client interviews added further details, indicating that unique resources were provided, collaborative product development was supported, product dissemination was enhanced, and the products changed practice. For example:

The information from the consortium has helped me do my work more effectively. It helps me to be knowledgeable about what's going on in other states and what best practices there are, and those types of things. It helps me do my job better.

LEA (Local Education Agency) Science Coordinator

The consortium is a link to national-level products on mathematics and science education. Serving as an ENC Access Center has allowed us access to quality materials for my use and in my training sessions with educators.

TA (Technical Assistance) Provider

If you have a question, they find you the answer. The consortium connects us to resources and keeps us informed.

LEA Curriculum Director

The resources are helpful and informative. The quality of the publications has been beneficial to teachers.

LEA Supervisor

3. Collaboration and Networking

The consortia and clearinghouse have successfully leveraged resources through extensive collaborative efforts. Networking and collaboration also have helped develop the capacity of the collaborators. Services in this area involved 22,527 client contacts over the five years. In addition, at least 82 percent of all Eisenhower Network activities involved collaborative partners.

The results of client surveys indicated that substantial value was added to the collaborators as a result of their participation in Network activities. At least 80 percent of survey respondents reported strengthened relationships among collaborators, increased coordination in providing services, increased access to resources, efforts leveraged for greater impact, and assistance in carrying out work more effectively.

The client interview results also spoke about these impacts, for example:

The niche filled by the consortium is their ability to convene and connect stakeholders to work collaboratively on systemic reform. The consortium has also been able to connect key organizations within the state in a way that no state-specific organization can do. The state department can't bring all the key players together. They have tried. Only the consortium has been able to do this successfully.

TA Provider

As an intensive site, we got to network with other teachers from our state and from all of the consortium schools at one state meeting and two regional institutes. It was really great to get together with the state team and share ideas...it was wonderful just to share success stories, or, you know, what didn't work.

Elementary Teacher

Last spring, I attended a two-day workshop on Case Studies so that I could share that approach to ongoing professional development with the teacher leaders I mentor. It was wonderful to have an opportunity to participate with other professional developers, or

people who work on a larger scale than just the school or district scale, from other parts of New England. In that way, the consortium holds a unique role, in that there isn't a lot out there for support and professional development for the professional developers. You know, it's an isolated bunch. And it's those networking opportunities that make it possible for all of us to do our jobs better.

SEA (State Education Agency) Staff

C. Conclusions

These findings were interpreted as strongly supporting the significant scale and value of Eisenhower Network services to clients throughout the country. In addition to relatively intensive resources provided in-person to a large number of teachers and others in the mathematics and science community, the Network has established Internet and print media capable of reaching all stakeholders.

The application of stringent Performance Indicators gave another view of a capable and productive Eisenhower Network. As seen in the report, the Network has successfully met nine of the ten benchmarks for indicators that are currently measured.

In addition, clients have indicated that Network services are unique in four ways: providing national and regional support, building capacity through professional development, forging connections across boundaries, and serving high-needs schools. The challenges evident in the evaluation results provide direction for future development, such as continuing to enhance the intensity of professional development experiences.

A final significant strength of the Eisenhower Network is demonstrated by the existence of the comprehensive and detailed information available for this report. From the inception of the consortia and clearinghouse, the Network members have been committed to self-evaluation for improving their services to clients. The Network has invested substantial resources in designing and conducting a coordinated evaluation effort. This coordinated evaluation, in turn, reflects the way the Network's 11 member organizations work closely together to develop, disseminate, and coordinate resources for improving mathematics and science education in the nation's schools.

I. Introduction

The National Network of Eisenhower Regional Consortia and Clearinghouse has become a dynamic regional and national school improvement support system for mathematics and science. Funded in 1992 by the U.S. Department of Education (ED), Office of Educational Research and Improvement (OERI), to help improve mathematics and science education throughout the Nation, each of the ten Eisenhower Regional Consortia (referred to as "consortia" throughout this report) serves an ED regional educational laboratory region. They are assisted and supplemented by the Eisenhower National Clearinghouse (ENC, also referred to as the "clearinghouse") located at The Ohio State University. The working relationships and infrastructure ENC and consortia have built with each other and hundreds of partners across the country have produced a mechanism for effectively delivering services and products to extend mathematics and science reform.

The consortia are specifically charged to: (1) provide technical assistance for the implementation of teaching methods and assessment tools for use by elementary and secondary students, teachers, and administrators; (2) disseminate exemplary mathematics and science education materials; and (3) build networks among mathematics and science resources within their regions and nationally. The clearinghouse collects, describes, and disseminates K-12 mathematics and science materials on an extensive scale nationally. The consortia and the clearinghouse, individually and as a collaborative network, conduct an intensive internal evaluation to document and assess their activities and impacts, and, as importantly, to provide information for strategic decision-making. This internal evaluation effort has been supplemented by several third-party evaluations sponsored by ED and reported separately.

A. Purpose, Audience, and Use

This evaluation report is addressed primarily to sponsors and partners of the consortia and clearinghouse network, as well as the staff of these organizations. It focuses in-depth on training/technical assistance, dissemination, and collaboration/networking activities conducted throughout the consortia five-year grant, and contains other selected summary analyses. It describes the activities and impact of the network, and also highlights areas for improvement of services. The Eisenhower Network published descriptive annual reports in 1997 and 1998 that depict activities anecdotally and include limited data about the type and number of activities and participants, or clients, nationally. The Network also has published previous evaluation reports for 1996-97 (May 1998), 1998 (May 1999), and 1999 (June 2000). These evaluation reports augment the annual reports by including more comprehensive, detailed descriptive information and participant opinion data about the usefulness, quality, and impact of Network services, products, and partnerships. The evaluation reports also describe outcomes in terms of the OERI performance indicators, as required by funding regulations.

The major purpose of this evaluation effort is to assist the ten individual consortia, the clearinghouse, and the Network to reflect on their work in order to improve their practice and impact. The combined use of an ongoing Consortia and Clearinghouse Descriptive Data System (CCDDS) database, in effect since October 1995, and more recently developed participant (client) survey and interviews provide rich data for understanding and assessing the work of the consortia and clearinghouse. Specifically, the evaluation report is intended to describe the client service activities across all ten consortia and the clearinghouse, document the contribution to the improvement of mathematics and science education by assessing client perceptions of quality and impact, and stimulate recommendations for improving services and the evaluation itself. Also, consortia partners and relevant policymakers may find the report useful in determining their desired role in connection with the consortia and clearinghouse to support the improvement of student performance in mathematics and science.

B. Sources of Data

The ten Eisenhower Regional Consortia and ENC have been involved in sustained efforts as a national network to define and collect pertinent data that describe their services to clients and assess their effectiveness. To that end, in 1993 the Network established a standing evaluation committee that prepared a national evaluation plan including both descriptive and assessment-of-quality components. That plan was put into place in October 1994 by launching a pilot-test year of quantitative data collection using the CCDDS (Consortia and Clearinghouse Descriptive Data System). The data system was extensively revised based on the pilot test, and the refined system has been in place since October 1995. The database describes each client-service activity conducted by the Eisenhower Network in terms of participant affiliation and role (e.g., teacher, administrator, policymaker), the length of the activity, type of service provided, content focus, contact method, and involvement of collaborators.

In 1997, a preliminary version of a national participant survey was developed and piloted in order to enact the assessment-of-quality component of the evaluation plan. The survey was designed to gather outcome and impact data from the recipients of products and services, with particular interest in effects on professional practice and student performance. Revised versions of the survey were administered in 1998 and 1999.

In 2000, an in-depth telephone interview procedure was developed and implemented in order to collect more qualitative information on impact. In all, 163 interviews were completed across the Network in the Fall of 2000. The results were coded for access by theme and used as the primary source for this report. The principal impacts noted by respondents are discussed and illustrated extensively by quotation from clients.

It should be noted that data for the 1995-2000 period for the Northwest Region was provided by the Columbia Education Center, which operated the Consortium in this region during that time. Starting in October 2000, the Northwest Regional Educational Laboratory took over operation of the Northwest Consortium and, consequently, responsibility for its evaluation.

More information on the evaluation methodology is given in Appendix A. The client interview protocol used in 2000 is presented in Appendix B. Appendix C contains an external audit report on the interview process. Appendix D shows the data collected for the CCDDS.

C. Highlights of Findings

This five-year evaluation shows that the Eisenhower Network has provided substantial support for improvement in mathematics and science education to educators across the country. The Network focuses on three major service areas: training and technical assistance, dissemination, and network-building. Over the five years, services were delivered principally through 169,798 in-person client contacts and 72,491,957 contacts using print and Internet media.

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SEA (State Education Agency) Staff

D. Conclusions

This evaluation effort was undertaken to enable description of the activities, outcomes, and impacts of the Eisenhower Network effort, as well as to highlight areas for improvement and change. Overall, the evaluation findings from the CCDDS, client survey, and client interview indicate that the consortia and ENC have taken great strides toward enabling effective reform of mathematics and science education. The Network has delivered a variety of client-service activities to intended audiences numbering in the millions, and consortia and ENC products and services have been rated very positively by clients.

The evaluation results provide a picture of what has been accomplished over the five-year grant. In the coming months, the consortia and clearinghouse staff will focus on how to use the findings to inform strategic decision-making which will shape future client-service efforts.

E. Future Evaluation Activities

The Eisenhower Network evaluators and directors have agreed to continue to use their two primary data collection sources: the CCDDS and the participant surveys and interviews. A short, formative report based on CCDDS data will be produced for the first half of each fiscal year during the summer. A detailed, more summative report will be produced after the end of each fiscal year during the following winter.

Participant surveys, interviews, and/or observations of activities will be conducted by the Network every year. Clients and activities to be sampled will be representative of all consortium and clearinghouse services. Case studies of sites receiving intensive services will be initiated in 2001. It is anticipated that evaluation activities also will be undertaken by external evaluators under ED funding Network evaluators will cooperate with these external efforts and utilize the results as appropriate.

The evaluation committee will continue to meet at least twice annually. The primary purpose of the winter meeting will be to produce a national-level report based on the prior year's data. The primary purpose of the summer meeting will be to review evaluation procedures and results, and to design changes in the evaluation system based on report results, current priorities, and currently available data. Additional meetings will be scheduled for special purposes as needed.

F. Structure of this Report

The sections that follow begin with a brief summary of the Eisenhower Network activities and outcomes in Section II. Section III highlights in-depth findings in the three major activity areas of the Network: training and technical assistance, dissemination, and collaboration and networking. Section IV focuses on the implications of the findings. The Appendices provide details concerning the evaluation methodology, the client interview form, the audit report on these interviews, the CCDDS content, the OERI Performance Indicator results for 1999-2000, and a matrix showing the relationship of the interview vignettes included in the report to the performance indicators.

II. Summary Description of Network Activities and Outcomes

As indicated in the introduction above, the Eisenhower Network has three principal purposes: to provide technical assistance and training that will help practitioners implement improved practices; to disseminate exemplary mathematics and science education materials that are useful in the classroom; and to build networks that help support improvement. This section provides a very brief summary of the scale of services provided to address these purposes over the five-year period from October 1995 through September 2000. It also depicts the results of these services as measured against the performance indicator benchmarks that have been established by ED for reporting on the Network's progress to Congress.

A. Training and Technical Assistance

Training and technical assistance are the most intensive services provided by the Network; they are provided primarily by the Eisenhower Regional Consortia. In general, such services are intended to support improved classroom practices and, as a consequence, student achievement. These services are designed to meet high-priority needs in the client environment, and they utilize high-quality materials and approaches. Training tends to engage larger groups of participants in building knowledge and experience, while technical assistance helps smaller groups of clients solve a focused problem or plan a particular event or resource material. Training and technical assistance services are combined in Network evaluation reporting.

Table 1 depicts the scale of training and technical assistance services in terms of the numbers of client contacts by year. Overall, 147,271 client contacts took place through network services under this purpose. Many activities were conducted for multiple days, engaging educators in in-depth work. The scale of service is quite substantial, especially given the modest level of funding available to the consortia.

Table 1
Eisenhower Network Client Contacts
In-Person Services

Activity / Year*	Training and Technical Assistance	Network Building
1996**	31,630	5,060
1997**	31,630	5,060
1998	33,869	4,479
1999	28,336	4,753
2000	21,806	3,175
Total	147,271	22,527

*Data are based on Consortia fiscal years, e.g., 1996=October 1995 through September 1996.
**Data for these two years were combined in a two-year CCDDS set which was divided in half for this display.

Over the five years, the scale of client contacts decreased. This is a function of two factors. The consortia aimed to increase the duration of the activities to provide more intensive experience for participants, and activity length did increase substantially over the years. The consortia made a conscious strategic choice to increase the quality of these services, based on the research on best professional development practices, with a consequent sacrifice in quantity. At the same time, the funding for the consortia remained constant, thus inhibiting growth. Even at the lowest level in 2000, the scale of training and technical assistance services provided by the Network is notable.

B. Dissemination

The dissemination purpose is realized on a very large scale as shown in Table 2. The Eisenhower Network utilizes both print and electronic media to deliver informative resources to clients across the country. These resources include newsletters, curriculum materials, thematic reviews, multi-media professional development tools, and forums for interactive discussion.

Table 2
Eisenhower Network Client Contacts
Large-Scale Dissemination

Activity / Year*	Print		Electronic		
	Consortia	ENC	Consortia Web	Consortia Listserv	ENC Web
1996	NA**	NA	NA	NA	NA
1997	306,557	NA	NA	NA	NA
1998	340,185	170,337	780,259	685,000	13,801,102
1999	125,212	553,861	2,108,797	1,220,049	16,394,536
2000	129,961	797,641	2,872,240	812,593	31,393,627
Total	901,915	1,521,839	5,761,296	2,717,642	61,589,265

Across the Eisenhower Network, 2,423,754 print products were disseminated, and 70,068,203 client contacts were made electronically through Web sites and listservs. This level of dissemination shows the capacity of the Network to reach the entire potential client pool in mathematics and science education using the media developed during 1995-2000.

As seen in Table 2, the clearinghouse is responsible for a large majority of the Web contacts, although all Network members have a substantial Web presence. It should also be noted that the consortia and clearinghouse actively collaborate on large-scale dissemination media.

Over the five years, electronic dissemination has seen exceptional growth, more than doubling in scale since data are first available across the Network in 1998. Although during the same time consortia print dissemination decreased, clearinghouse print increased. This yielded an overall increase for print media as well.

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*Data are based on Consortia fiscal years, e.g., 1996=October 1995 through September 1996.
**Dissemination data are not captured consistently across the Network in the CCDDS in several cells, which are marked NA.

C. Collaboration and Networking

Table 1 also shows the scale of services devoted to network building. These services facilitated collaborative activities and resources to build capacity for mathematics and science education improvement. Examples include supporting advisory and professional development groups, sponsoring conferences, and building communications networks. While networking is important per se as a service to clients, it is probably even more important as a strategy to increase improvement efforts by engaging a wide variety of partners and resources.

Over the five years, 22,527 client contacts took place in the context of in-person network-building services. As significant, over the last three years, 82 percent to 90 percent of all consortia activities involved collaborating partners (Table 3). The Eisenhower Network strongly emphasizes networking and collaboration as means to effective improvement in mathematics and science education.

D. OERI Performance Indicators

The Eisenhower Regional Consortia and the Eisenhower National Clearinghouse have standards for their individual productivity and performance built into their program plans. These standards cover the nature, scale, and quality of services intended by each organization. As a Network, the consortia and clearinghouse have agreed to a set of performance indicators, promulgated by OERI and used by the Department of Education in its performance reports to Congress since 1998.

These indicators set 11 benchmarks for the consortia concerning key features of technical assistance, collaboration, and dissemination services. Achievement on the benchmarks is measured using the CCDDS, client surveys administered by Network evaluators, and third-party evaluations commissioned by the Department of Education. The results for 1998, 1999, and 2000 are given in Table 3. (More detail is given specifically on the 2000 results in Appendix E.)

Of the ten indicators currently measured, eight benchmarks have been met consistently across the Network in all years, and a ninth has been met in one year. Among these, the degree of positive findings have generally increased over the years. These results attest to both the high quality and scale of services provided.

One indicator benchmark has not been met in any year (Indicator 1.2). The consortia aim to have 60 percent of their activities be intensive, meeting at least a standard of 12 hours. The results have come close but not met the benchmark. Performance on another benchmark, effectively training trainers (Indicator 1.6), was under in one year and above the criterion in another, and therefore is not consistent. The Indicator 1.4 on student test scores has not been measured yet, and so is marked "NA." It will be measured in 2001. Also, six of the other indicators were marked "NA" for 2000 because they are measured by the client mail survey, which was not administered in 2000. The consistent high results in previous years suggests that these indicators would have been met in 2000 also.

In summary, all these findings show an efficient and effective program of Eisenhower Network services. The next section provides an in-depth view based on interviews of clients.

Table 3
Eisenhower Network Performance Indicator Summary

Indicator	Standard	Data Source	1998 Results	1999 Results	2000 Results
1.1 TA* aligned with standards	80% of participants report	Survey	✓(97%)	✓ (99%)	NA
1.2 TA intensity	60% of activities are 12+ hours	CCDDS	X (39%)	X (59%)	X (51%)
1.3 Intensive TA improvements in practice**	80% of participants report	Survey	✓(91%)	✓(96%)	NA
1.4 Intensive TA improvements in student performance**	80% of participants report	Survey	✓(89%)	✓(94%)	NA
1.5 Intensive sites' improvements in student scores	Measurable improvement	School or district assessments	NA	NA	NA
1.6 Training of trainers produces training of others	80% of participants report	Survey	X (78%)	✓(83%)	NA
1.7 Intensive TA targeted on at-risk	70% of participants report	CCDDS	✓(70%)	✓(73%)	✓(80%)
1.8 All activities involve collaborators	80% of all activities	CCDDS	✓(82%)	✓(86%)	✓(90%)
1.9 Impact of collaboration as value added	80% of team and network members report	Survey	✓(80-85%)	✓(85-93%)	NA
2.1 Dissemination of resources	10% annual increase in print and/or Web hits	CCDDS	✓(+11% Print + 8% Web)	✓(-63% Print +70% Web)	✓ (+3.8% Print +10.7% Web)
2.2 Utility of products***	50% of participants report	Survey	✓(68%)	✓(77% and 82% of products)	NA

*TA includes technical assistance and training.
**Indicator refers only to intensive subset of activities (1.2), but results here are for all activities.
***Results are described in terms of the percentage of Consortia and ENC products (separate percents) that contributed "moderately" or "significantly" to improving the work of recipients.

III. Outcomes and Impacts

This section of the report focuses on results derived from the 163 in-depth client telephone interviews conducted by the Eisenhower Network evaluators. Please see Appendix A Evaluation Methods, for more information about how interviews were conducted. This appendix also includes descriptive information on the interviewees. The purpose of these interviews was to collect more detailed qualitative feedback from clients than was possible using the previous larger-scale mail surveys. The benefit of this methodology is that it provides in-depth descriptive information about the quality and utility of Consortia work. The limitation of using this method is that the information is obtained from a small sample. Therefore the information may, or may not, generalize to the total population.

The interviews have been analyzed thematically, rather than quantitatively. The themes are illustrated with extensive quotations, or vignettes, drawn from the interview transcripts and organized under the three Network purposes: training and technical assistance, dissemination, and collaboration and networking. The vignettes are numbered in order of presentation and cross referenced to the OERI Performance Indicators in Appendix F. While the clients' own words have been preserved as much as possible, quotations have been edited for clarity.

A. Training and Technical Assistance

The training and technical assistance activities of the Eisenhower Regional Consortia were designed to improve participants' classroom practice and, consequently, student engagement and performance. These activities typically included a focus on the alignment of curriculum, instruction, and assessment practices with state and/or national standards. Previous Network evaluation reports have relied upon quantitative data to document these activities and, to some extent, their impacts. This section presents vignettes created from in-depth client interviews conducted in the Fall of 2000 to provide more qualitative data. The vignettes illustrate the unique role that the consortia provide with respect to training and technical assistance, the scope and nature of these services, and the impact on various clients.

1. Overview of Impact

With regard to technical assistance and training, the consortia play a valuable role in several ways. They offer a wide range of expertise in curriculum, instruction, and assessment in mathematics and science education; immediate access to the latest information and research-based resources in mathematics and science education; and an understanding of the systemic nature of educational reform and how that plays out at the local, state, regional, and national levels. In addition, the consortia are in touch with the needs and concerns of educators within their regions. Using this information, they are able to tailor the training and technical assistance they provide to meet individual client needs.

A member of a state coalition for mathematics and science in the Mid-continent Region expressed appreciation for the valuable overall role of the consortia and the expertise that they bring to staff development:

> I think the consortium fills a very important niche, for all school districts who take advantage of it. The consortium staff has a wide variety of expertise—professional expertise in the area of math and science—that you can't find any place else. Additionally, when I am looking for something very specific, it is not ok for them to say, "We will get back to you," and six months later they haven't. With the consortium, it is usually right on the phone, they will say,

> "Talk to so and so in this city, or that city" or "You know there is a teacher in-state doing the exact things you are looking for, why don't you give them a call?" Then you just pick up the phone and call these people and say, "Gee, I got your name from somebody at the consortium," and they say, "Oh yeah, I know those people." It just kind of opens the door and breaks down the barriers and off you go. What seemed like an insurmountable problem ten minutes ago is now an easily answered question. I have also gotten information, either printed or electronically, or the consortium has given me a web site to go check out—just all sorts of valuable things that I really appreciate.
> —*Vignette #1*

In providing training and technical assistance, the consortia work collaboratively and flexibly with schools, tailoring assistance to meet individual school needs. At the same time, consortia assistance is grounded in research and focused on aligning practice with state and national standards. An elementary school principal from the North Central Region commented on the ways in which the consortium staff tailored staff development by helping his staff to align state goals with the standardized achievement test used statewide and by assisting teachers in improving their practice using research-based strategies. The result was a better learning environment for underrepresented students and improved student performance:

> The consortium staff has been providing intensive technical assistance in the area of mathematics to us for the past two years. Specifically, the consortium worked with our staff during the half-day in-services on the alignment of state goals and objectives to the Iowa Test of Basic Skills and in effective, research-based instructional strategies. One of the areas that we noticed our teachers were weak in was the use of manipulatives and the instruction of math. The consortium staff was able to demonstrate and model effective practice by working individually and collectively with teachers to give them a better understanding of how to use manipulatives in the teaching of math. That is the type of environment I think makes for helping at-risk students in their growth. The consortium's approach was tailored to the school's needs, as opposed to a "canned" program; that's what made the difference. We went up a great deal on our math test scores in the two years that the consortium has been working with us.
> —*Vignette #2*

Focusing on the consortium's understanding of issues related to systemic reform, a professor in higher education within the Southwest Region talked about what she, and other participants, gained from attending a regional meeting sponsored by the consortium:

> We would all get a common understanding of issues related to systemic reform. We get current on what is coming up, what is important to each of us, what is important for the students, and what is important to the government.
> —*Vignette #3*

Because the consortia provide tailored, research-based expertise that is focused on mathematics and science school reform, the technical assistance and training provided through the Eisenhower Regional Consortia have had a positive impact on teachers, students, teacher preparation programs, informal education institutions, districts and states, and training-of-trainers programs. Each is discussed below.

2. Impact on Teachers

Evidence of the impact of technical assistance and training on teachers included an increase in teacher knowledge and skills, increased confidence in teaching mathematics and science, increased collegial sharing among teachers, and improvements in classroom practice.

- **Teacher knowledge and skills increased**. A consultant with the state department of education in the Southeast Region, who is also a content specialist at a local school, first became involved in 1992 with the consortium as a participant in the Academy—a "trainer-of-trainers" model for the improvement of mathematics and science education. Since then, she has not only improved her own teaching but also has done a tremendous amount of consulting work related to consortium activities, particularly with regard to the National Science Education Standards, Project 2061, and Alternative Assessment. This client improved her own practice by implementing standards-based curricula, instruction, and assessment in her classroom. She contends that:

> With the training that I received over the years through the consortium, the Academy, the various conferences, promising practices, etc., it came home to me that my focus had not always been on learning, but to keep students' attention. However, my keeping students' attention wasn't as important as focusing their attention on the objectives. I came to understand that, while I wanted interesting activities, I wanted interesting activities that had a purpose, that were focused on the standards and the objectives that I was trying to convey to the students. And I think, if nothing else, in my classroom during the time I was affiliated with the consortium, it was that involvement that made me not just a better science teacher, a more enjoyable science teacher for my students, but it made the substance of my content stronger.
> —*Vignette #4*

In addition, this teacher's efforts for improving her teaching resulted in being recognized by the National Board for Professional Teaching Standards. The Board rewarded her instructional excellence:

> Had I not had the background, the training, the exposure to what was going on outside my state and around the country with science and math education reform, I would not have known about National Board certification. And, I feel relatively certain I would never have achieved national certification had I not had the kind of exposure that the professional development and training through my affiliation with the consortium has afforded me.
> —*Vignette #5*

Several of the interviewed teachers described a similar experience. For example, one teacher from the Southwest Region explained:

> Last year, I was a presidential awardee. I really credit my work with the consortium and the experiences that she provided for us through the Master Teachers project for helping me to get that award. I credit the training I got through the consortium with making me aware of national standards and TIMSS. Before being involved with the Master Teachers project I had heard of national standards but I had not worked with them a whole lot.
> —*Vignette #6*

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Several teachers throughout the consortia regions have received recognition for excellent instruction. They attributed that accomplishment to their participation in consortia professional development activities that provided them increased knowledge and skills.

- **Teacher confidence increased.** In addition to increasing their knowledge of instructional practices, several of the interviewed teachers also commented on their increased confidence in teaching mathematics and/or science because of their involvement in consortia activities. An elementary school teacher in the Northeast and Islands Region described how her school's involvement with the Regional Alliance Consortium affected her confidence as a teacher:

> Math has always been one of the areas that I've done, but not felt really comfortable about doing. Three years ago, when we changed over our math program to the Everyday Math, it was quite frightening. The first year we taught it, we were like, "Oh my goodness. We can't do this. We need some help." That's when we turned to the consortium. Having these people come in and help us through this certainly built up my confidence tremendously. The program was so new to us, and many of the teachers haven't had geometry or algebra or those kinds of things in many, many years. And to be expected to teach it, when you're not feeling comfortable with it to begin with, was a difficult task. Having the people come in and actually present a lot of the new strategies for us was very helpful. I now have a better knowledge base and a lot more self-confidence in teaching math.
> —*Vignette #7*

- **Teacher collegial sharing increased.** Several of the interviewees attributed an increase in teachers' collaboration and sharing to the training they had received from their regional consortium. A principal of a middle school involved in the Appalachia Region's Middle School Mathematics Project shared his views of how the consortium's technical assistance improved his mathematics teachers' performance:

> This school has a renewed focus on planning to ensure that the curriculum is aligned with the standards and that the instruction and assessment are aligned with the curriculum. In addition to the improvements in instructional practice, I am seeing a collegiality among the math teachers. Before our involvement in the Middle School Math Project, it was a 5th grade teacher in one room and another 5th grade teacher in another room. The 6th grade teacher didn't talk to any of the other teachers. Now, teachers are collaborating and sharing. Before, teaching and learning were rarely discussed among teachers because of a fear factor—you might not be viewed as capable among your colleagues. The work with the consortium has given the math teachers here permission to talk and share about teaching and learning. From this discussion came our movement toward better alignment of curriculum, instruction, and assessment.
> —*Vignette #8*

- **Classroom practice improved.** The impact of the regional consortia on classroom practice included improving the alignment of curriculum, instruction, and assessment with standards; increased use of inquiry-based and hands-on activities; increased use of alternative forms of assessment; increased attention to multiculturalism; and increased reflection on the process of teaching. The following interview segments illustrate the increased use of these types of practices.

  A district science supervisor in the Mid-Atlantic Region noted how participation in consortium activities helped to better align professional development opportunities in their district with standards:

> The two TIMSS conferences sponsored by the consortium allowed me to introduce TIMSS into the Project 2061 workshop and to connect the TIMSS results to the science benchmarks. I would never have done that if I had not gone to the TIMSS conferences.
> —*Vignette #9*

In the Northeast and Islands Region, an elementary school teacher also commented on how the consortium assisted with aligning curriculum and instruction with standards. Over a two-year period, her school was designated as an intensive school site, where the school team received more than 60 hours of professional development, coaching, and technical assistance focused on their mathematics curriculum and instruction, plus two, three-day summer institutes:

> During the first math course offered by the consortium, we had to design a specific unit that had to be aligned with the standards. That was really the first time that I've ever had to really look at our state standards and align a unit that I've developed, especially in the math area. We looked at all the different state standards and went through some of the activities that would tie into that standard, some of the hands-on type activities that I really wasn't familiar with. By doing them, practicing them, and manipulating some of the hands-on type materials, I was able then to take those materials back into the classroom and know that I was hitting the standards that I was supposed to be hitting with those activities.
> —*Vignette #10*

Another elementary school teacher in the Northeast and Islands Region noted how her new understanding of the state standards allowed her to implement them in a way that met the needs all students, even those who struggle with reading, through the use of instructional activities that incorporate different modalities:

> I had always had a tendency to go by the science text. Now, I've realized that the science text does not follow the standards so much. You know, there's a unit on digestion and there's a unit on plants, etc., but the state standards are more geared to assimilating information and gathering data and collecting facts. Now in my classroom, we're doing a lot more data collection, we're doing a lot more assimilation of information, we're doing a lot more writing with science, as opposed to just, "Here's the text. Read the chapter. What do you think?" Additionally, I'm learning—because of my experience with consortium—to vary the way that I teach so that all modalities are reached, instead of just the regular ways that I used to do. They had to learn how to collect data, so they had to learn how to read a tape measure instead of a text, or they had to learn how to use a scale or read millimeters. For the kids who are non-readers, all of a sudden, they were able to participate more actively because the reading part was out of the way.
> —*Vignette #11*

In addition to learning about the alignment of instruction with standards and using varied interactive instructional practices, one higher education teacher in the Southwest Region talked about the value she gained from a regional meeting that focused on how to meet the multi-cultural needs of students within education:

> The training was helpful in providing me with an awareness of some of the multi-cultural issues that are out there. For me, the major minority in my area is Black. I had taught in a 90 percent Black school. I did not realize many of the needs of those students until I actually was immersed in their culture during the meeting—for a very short period of time—through other people in the room. There was quite a diverse representation in the

> room and we were able to become aware of needs that we had not even thought about—especially for me, with the Native American population and the Hispanic population. We don't have many of these minorities in my area, but you move over two parishes and there you are. We have student-teachers who leave here and go teach in those parishes. The training not only made me more aware but it gave me some ideas to give my student-teachers—ideas on how to better serve their students.
> —*Vignette #12*

Finally, in addition to learning more effective instructional and assessment practices, the training and technical assistance prompted several teachers to describe how they are being more reflective about their instructional practice. An elementary teacher in the Far West Region said:

> In Science Cases, we have collegial conversations once a month with fellow teachers and consortium facilitators, where we reflect on and analyze the way we teach certain concepts. Our conversations focus on the metacognitive side of teaching. For me, it's helped in thinking about how I'm going to improve my teaching in a way that enhances student outcomes. It's also how to think about and how to approach it so I CAN do it. The case studies make me far more aware of what has to be done, and how it has to be done sooner and better. I've realized that I need to expose my students to certain concepts so they have a foundation to build on in the later grades. I've learned that I have to change how I approach teaching. The case study discussions have affected my mental approach, and how I set up what I'm doing with the children. I like to see this sort of professional development being offered, because this is where the change is going to happen. I'm not going to change when you run me through some two-hour workshop and I come away with eight dittos and a game. I need to analyze what I do. I can get value out of the science case discussions...THIS stuff, I can reflect on!
> —*Vignette #13*

3. Impact on Students

The interviews with consortia clients also served to illuminate the relationship between changes in teacher practice and improvements in student performance. In this instance, student performance is broadly defined to include what students know (i.e., achievement), what they can do (i.e., demonstration of higher-order thinking skills and other skills emphasized in standards-based education), and the extent to which students are actively engaged and interested in the study of mathematics and science.

- **Student achievement improved.** Although the evidence was often anecdotal, consortia clients did comment on the positive association that developed between working with their regional consortia and improvements in their students' test scores. One administrator attributed the continuing rise in students' mathematics and science test scores to teachers' attendance at consortium-sponsored workshops in the Appalachia Region. Mathematics teachers in the North Central Region also felt that the increase in test scores for their underrepresented students was due to their collaborative work with the regional consortium around teacher professional development:

> I have been participating in Project REAL (Rural Education Alignment for Learning) the last two years. Project REAL involves six very poor, rural school districts. These school districts were chosen to be a part of the project because of their high poverty levels and because they have been classified as academic-emergency or academic-watch schools. The consortium is one of the partners of this project and has been providing professional development and networking opportunities. As a result of my participation in Project

> REAL, I have developed a class called Math Labs that's hands-on, engaged learning. I don't sit at the desk anymore. Instead, I go outside and we apply math and do some things outside of the classroom. I think that is a big reason why our state test scores really jumped up like they did and our kids showed improvement in the areas of measurement, geometry, and problem solving. I give a lot of credit to the involvement I have had with the consortium. We were first in our county and we were one of the highest scorers in the state. I think that's because of some of the neat ideas, the motivation, and the sharing with other math teachers and with the people at the consortium around the curriculum changes we made. We have a couple of fourth grade teachers on Project REAL and their math scores went up 20 percentage points over this past year. They really think that it has to do with Project REAL.
> *—Vignette #14*

A science teacher in the Mid-Atlantic Region provided professional development to other teachers using support from the regional consortium. In describing the process and its effects on student engagement and student achievement, the teacher explained:

> We take high-tech equipment to the classroom and use it to co-teach with high school science teachers. Our mission is the professional development aspect of it. To get the "goodies" in the classroom, teachers have to attend one of our workshops during the summer. We go into all but one high school across the state: rural, urban—even prisons. We send out evaluations after our classroom visits, and teachers say they are trying new things and changing their instruction. Students use laptops interfaced with electronic data collecting probes. The kids say, "Hey this is cool," and they are up and engaged. We have done our own pre- and post-tests and an independent evaluator did an evaluation. His results supported the conclusion that the project has enhanced achievement for students.
> *—Vignette #15*

- **Student engagement enhanced.** Clients also mentioned improvements in students' interest in learning mathematics and science. In the Northeast and Islands Region, a study that compared 200 teachers who participated in professional development with a random selection of non-participants found significant differences in student engagement, curiosity, and active participation. An elementary teacher from the same region also commented on students' high level of engagement with the standards-based science kits:

> Kids will ask to come in at recess to do some more tries with the kits we use to do some of the physical science…you know, gears, levers, pulleys that the kids use to build models. They're talking about what they're doing and going above and beyond what they have to do.
> *—Vignette #16*

In the Pacific Region, a state mathematics curriculum specialist, who has been involved with the consortium since it began, has received reports of students taking the initiative to engage in mathematics activities during their free time. Additionally, the curriculum specialist has received reports about increased student attendance in schools where the teachers are implementing the standards-based practices they have learned through the regional consortium training:

> I work with teachers, students, and school administrators in facilitating and coordinating the mathematics curriculum across schools. I've been with the consortium from the beginning and we've made great strides. I've seen definite changes in math and science classrooms. More lessons are standards based, with teachers doing more inquiry-based activities. As a result, students spend more time learning from one another within groups.

> Students definitely are more engaged and motivated to learn math! Because of all of the math activities that have been provided and the training received through the consortium, all of our students K-12 are enjoying their math classes. In fact, they love mathematics more than any of their other subject areas. I have received numerous phone calls from principals regarding positive changes in the math classrooms: attendance in class has gone up, and in one class, students have requested to play math activities during recess time! Because of the consortium training, students and teachers are changing their views of mathematics from thinking of it as boring and difficult to thinking of it as a fun subject.
> —*Vignette #17*

Teachers are seeing students become more engaged by activities that are hands-on. As one elementary school teacher in the Northeast and Islands Region shared, making science come alive through hands-on activities ultimately has an effect on student performance:

> In past years, I've noticed that kids do poorly in science and social studies as a rule because they don't find it interesting. Now, science is like a living organism in my classroom. Students are not trapped by the book. They can move around. They get to sort and classify and measure and weigh. And I don't know of any kid who wouldn't find it interesting if they were getting out on the playground and measuring for a playground, or measuring a ramp and how far the ball went. When they take part in an activity where they are in charge of writing down the information with a partner, they own the information. They take responsibility for it and they understand it a lot better than if they're getting it just straight from the book. So, certainly their academic achievement is enhanced. Last year was the first year, and I know it's partly because of my involvement with the consortium and my study group that I'm seeing these improvements in students' performance. Our building scored the highest on the state science tests out of all six elementary schools in our city. My kids, for the first time in years, couldn't wait to get to science class!
> —*Vignette #18*

Helping teachers to implement more culturally relevant curriculum in the Mid-continent Region was another way that the work of the consortia supported activities that engaged both students and parents in learning mathematics and science:

> I teach at an elementary school where the majority of students are Native American and considered at-risk. We were looking at where our students were lacking in meeting the standards and made a commitment to emphasize those areas in ways that highlighted the students' culture. As part of my involvement in the Culturally Relevant Curriculum program, we were able to help connect what students were learning in science to their culture. Both the students and their parents became more engaged in studying science. Students were much more excited about studying the stars and the planets when we connected it to their culture. Then they would sit and really listen. We also offered family science nights to get parents involved. Working with the consortium was sort of a catalyst; I don't think I would have done any of this if I hadn't had the training or been encouraged by my school to go ahead and do it. And I am sure that none of these activities would have been done in our school even though our students are predominately Native American; we just did not have that much awareness of Native American culture in the school. Since we started working with the consortium, however, we have really connected the students' culture with math and science and the students are benefiting as a result.
> —*Vignette #19*

4. Impact on Teacher Preparation

The impact of the consortium goes beyond the K-12 classroom. Teacher preparation programs are also rethinking how they go about their work. For example, a high school mathematics teacher in the Southeast Region has been involved in consortium-supported activities for almost eight years. She has been a participant in the Academy (a "trainer-of-trainers" model for the improvement of mathematics and science), the Summer Institute (which provided a model for teaching/learning mathematics topics in pre-algebra, algebra, trigonometry, pre-calculus, calculus, and linear algebra), and several other consortium-sponsored workshops. Because of her long-time involvement with the consortium's activities, she has had multiple exposures and ample opportunities to talk with university instructors who attended the training with her. She passed on her insight gained from these conversations:

> Our main objective is to see students better off, and the Academy really helped with that—from curriculum and instruction alignment to improving classroom instruction. Having spoken with some of the university people at some of the meetings, I know they are adjusting some of their teacher education programs to reflect some of the things we've seen at the Academy.
> —*Vignette #20*

A professor of science education in the North Central Region discussed how working with the regional consortium to provide professional development opportunities has improved capacity in training others, be that through workshops or more formal teacher preparation programs:

> I am the director of the Science Education Center and professor at a midwestern university. I have been involved with consortium projects since their inception back in 1992. Initially, my involvement began through my participation on their advisory board. The consortium has also provided technical assistance the past several years in the implementation of the higher education Eisenhower grants I have received. For example, one of the workshops we do before our summer institute with the mentors is a workshop on facilitation. The last several years, the consortium would send us a staff of one or two to work with us in setting up a facilitation strategy workshop for these mentors. During the summer institute they would follow-up and come back with the whole group, mentors as well as peers, and introduce to the peers some of those same facilitation strategies we used in working with their mentors. As a result of the collaboration with the consortium, relationships were strengthened both with the university's teacher education program and the state's intermediate units. Working with the personnel from our regional consortium has certainly provided me with some unique experiences that enabled me to coordinate all of my efforts so much more effectively, as well as efficiently. I, just like the lead teachers, am learning immensely from what they do and I can use that in organizing and coordinating our entire efforts, not only in the grant-related work, but in my work as a pre-service educator here in our teacher education program.
> —*Vignette #21*

A university teacher-education instructor in the Southwest Region has also been involved with many consortium events and has passed the information she has gained to her student teachers. She credits the consortium training with giving her information about standards-based instruction and strategies for addressing multicultural issues. However, her most valued aspect has been a renewed enthusiasm for teaching. She explained:

> I have heard by word of mouth that my student teachers do indeed use things I have taught them from my consortium training when they are out there teaching, and that

pleases me. But I think what I get from the consortium, and can pass onto my students, is a definite energy boost—a revitalization of my love for what I do—and my curiosity stays alive and well. I would rather give these three things (energy, love of teaching, and curiosity) to my to-be-teachers than any knowledge or skills. The skills, they can always learn if they keep their curiosity and interest alive.
—Vignette #22

5. Impact on Informal Education Institutions

The regional consortia also support institutions that provide education informally. As a result, these organizations are able to enhance their programming with what they have learned about standards and frameworks, and speak the same language as the formal educators they so often serve. An informal educator in the Mid-continent Region had this to say:

> As a performing arts organization, we would be considered an institution of informal education. A general sweeping statement could be made about people like myself—education directors—that we are performers who may not have a formal degree in education and so don't know the education aspects. The training that the consortium has provided my colleagues and me has completely opened up a world that we were not aware of. I think a lot of us are getting a lot more savvy about who we chose to write curriculum for us, how we go about it, the potential of integrating curriculum, things like that. We are still, I would say, on the naive side to some extent, but it is very, very different now than it was ten years ago when I got into this business. We're not taking a shotgun approach, but rather a very sequential one, where there is a reason for what we do and everything builds on something else; there is a lot more theory backing up our actions. As a result, the teachers we work with are more apt to implement the lessons because they know they are accomplishing some other, more tangible educational goals, in addition to exposing their students to the arts.
> *—Vignette #23*

A participant attending a training offered by the Northwest Region consortium commented on the extent to which informal educators were excited about and engaged with the material being presented at the workshop. Furthermore, the training stimulated them to change their own practices:

> The people from informal science were the surprises—they were really positive about learning what national and state standards were, and how they could bring their programs in alignment with them. I had expected boredom and resistance from this group, but found them to be more excited than the formal educators! The small schools and the teachers from these schools have had at least one or two priceless experiences and will know now what they are missing. But what I will remember the most was watching informal science representatives become really enthusiastic about national and state standards, and actually eager to get home and change their programs accordingly. Several were people I saw again, and they had stories about improvements they had made and how much better their programs were.
> *—Vignette #24*

6. Impact on District and States

In addition to providing direct training to improve teacher practices and student outcomes, the consortia also targeted training and technical assistance to individuals and groups working at the district and state level in hopes of having a broader influence on the policies and practices that

support such improvements. The following interview segments illustrate the impacts of the consortia at the district and state levels.

A district representative from the Far West Region described how their district was able to build upon the training provided by the consortium to align their curriculum with the standards and track student performance:

> Our district is currently modifying its report cards to be standards-based. The consortium has supported our district by providing Learning from Assessment workshops. The Learning from Assessment module provided a framework to use in aligning the standards with the curriculum and then thinking about how we assess progress on the standards. Starting with this framework, the teachers began working on a matrix to see where their curriculum and the textbooks they were adopting and the supplemental materials they were using were meeting the standards. As a result, the teachers feel like they have a plan for meeting the standards. Keeping the goals of the standards in mind, we're looking at our students to see how they're performing *as* we're doing our lessons and looking at what that is telling us so we can reach our goal of meeting the grade-level content standards. As a result, there is more purposeful teaching happening, and it's meeting a wider variety of student ability needs.
> —*Vignette #25*

When other regional providers participate in consortium training activities, along with staff from the districts they serve, the positive effects are evident throughout the education system. In the Northeast and Islands Region, a representative from one such provider organization described how their ability to work effectively with districts was enhanced by the ways in which the channels of communication opened up among key players in the education process:

> As a participant in the Using Data workshop, it made me think about data and how I use data, or don't use data. It caused us as an organization to start asking some questions about data leading us, versus us trying to figure out what to do. So, it caused us to have a little discussion about our organization, which is always healthy. And about how we should be asking some questions maybe a little differently than we were, and use data to drive some of our decisions. And it really did increase the quality of conversations we were having with our districts. Quite frankly, it gave us, as a regional service provider, a doorway in to help them with those conversations. So the workshop was kind of like a can opener. We were able to help the districts focus their attention on standards-based curricula, after looking at their standardized state assessment scores and trying to determine what was going on. Their questions often led to the conclusion that the state assessment isn't sufficient to know everything they want to know about how their students are doing. We asked them to look at other tests they've taken, look at teacher kinds of things, and look at student work. The workshop increased the quality of the conversations the school districts were having, teacher to teacher, administrators with teachers, parents and teachers, about really improving practice and improving the content focus for kids. Looking at their data and experiencing that workshop has certainly influenced the way some districts are now approaching curriculum selection…they've gone beyond the "five-minute-thumb-through-the-books" method to a whole piloting process, based on looking at the data.
> —*Vignette #26*

Additionally, it is believed that changes brought about by technical assistance at the district level may also "flow upward" to influence state-level policy makers. Examples of consortium activities included state-level meetings that often targeted state-specific issues or systemic initiatives.

Consortia members have assisted state education agencies in designing state-level student proficiency exams and in aligning state exams with national standards. They have also assisted states in building state-level capacities to understand and disseminate information about TIMSS reports and to provide professional development regarding strategies to help close the achievement gap between Caucasian students and students of color.

In the Appalachia Region, a representative from a state department of education commented on her involvement with her regional consortium in providing professional development opportunities for educators on classroom equity issues through a regional equity conference. The 2000 Equity Conference was held in collaboration with a state education agency:

> I was involved as a conference-planning coordinator. I collaborated with the consortium mainly in planning technical assistance activities for educators of under-represented students in our state. One of the presenters at the equity conference provided strategies for working to close the achievement gaps with minority students. Our division used her strategies to develop a policy that focused on student achievement. This policy is being piloted in six districts that have 72 percent of the minority student population in the state. The policy requires that the strategies be used in the classroom to show achievement. There are two checkpoints for improvement, FY 2002 and FY 2004. We hope to see a difference then in the 4-6 grades in terms of closing the achievement gap. Following the pilot, this policy will be available statewide. Equity is an extremely important topic. By collaborating with the consortium, I have access to resources that assist me in my work and assist our division in providing services to schools and districts with a majority of at-risk students.
> —*Vignette #27*

In the Far West Region, a client utilized the consortium to provide professional development around standards-based education for all of the tribal schools in the state:

> When the state accountability test was adopted in our state, teams from the eight tribal schools came together to try to align our curriculum to the standards. At the point we started, you couldn't recognize any similarities in the curriculum from one school to another. Even though each school needed to retain their individuality and how they delivered their education, we had to adjust in order to standardize our curriculum across the Indian community. That's when the consortium was brought in to do professional development, because we'd get stuck wondering, "How do we do this?" Last fall we had two professional development programs for all teachers out at all eight schools on how to do this. Everybody started recognizing, that "Yeah, this will work. It may take five years, but we're going to see a little bit of difference every year!"
> —*Vignette #28*

7. Impact on Training for Trainers

In addition to sponsoring and providing direct training and technical assistance to teachers and other educators, the regional consortia also foster systemic reform through the use of a train-the-trainers model of professional development. Participants in the train-the-trainer sessions include district and state-level staff, representatives from institutions of higher education and professional organizations, and teachers.

- **District and state-level trainers served.** A long-time participant in the Appalachia Region's consortium-sponsored events for trainers commented on the consistency with which the material helped the trainers to enhance their understanding of standards-based education and the strategies for bringing such a system into being:

> I have been involved as a team leader and trainer for several years, and every time a team leader or train-the-trainer meeting took place, we learned about new ways we could help teachers learn more about the national and state standards and their curriculum. When teachers attended our consortium training workshops, they were provided with instructional practices to use in their classrooms that were aligned with national and state standards.
> —*Vignette #29*

In the Appalachia Region, a director of mathematics, science, and technology discussed how the consortium's training-of-trainers model supported the district in developing a new curriculum:

> Our school district has received tremendous support from the consortium over the past three years as an intensive school site. When we were looking to adopt a new, standards-based math curriculum, the consortium sent us to workshops that gave us a first-hand look at several math curriculum materials, and then prepared a cohort of teachers and staff developers in our district to train the rest of the teaching staff in using and evaluating the Investigations curriculum we adopted. Our staff developers and trainers brought back ideas about what needed to be done in the classroom to effectively get students to understand mathematics. We're trying to get away from algorithms and talk more about mathematics in depth, but we're finding that our teachers really don't have an in-depth background in mathematics. So we're providing them with professional development to understand the math content and what kids think about when they talk about mathematics. Now, what I'm seeing in classrooms is students working together in groups to solve problems; whereas, a year or so ago I saw more students sitting passively and just listening.
> —*Vignette #30*

District trainers in the Southeast Region also commented on the role their regional consortium played in helping them to map out strategies for supporting teacher leaders:

> The consortium has been providing us with several different services related to the development of teacher leaders in the district. I think that what the consortium did in its work with us was to clarify important roles for teacher leaders and to provide some models for what reform should look like at the classroom level. I would have to say that they helped us to formulate the rationale and support for a site-based professional development model that focuses on coaching teachers at the school site and developing a deeper capacity within the school building to sustain reform. Not only did the consortium staff help me personally and other staff in the district with the formulation of that strategy, but they affirmed that this strategy has credibility beyond just our district.
> —*Vignette #31*

Consortium-sponsored training-of-trainers was also cited as a means of enhancing the knowledge of state-level trainers that ultimately led to improvements in the quality of training provided to others. In the Northeast and Islands Region, a state-level trainer explained:

> I work with teacher leaders in schools across the state who are responsible for designing ongoing professional development for their colleagues in order to improve their math program. Last spring, I attended a two-day workshop on Case Studies so that I could share that approach to ongoing professional development with the teacher leaders. The workshop was fabulous. It exceeded my expectations. As a participant, I was impressed by simultaneously receiving training as a participant in the process and being shown how to roll it out and to share it with others. I think that the facilitators were so skillful in making explicit the different roles and ways to participate.
> —*Vignette #32*

A state science coordinator in the Pacific Region described how involvement in the consortium increases confidence and empowers state-level trainers to do their work more effectively, particularly when it comes to working with the people in the trenches:

> I've participated in consortium activities on a number of levels, including the development of regional standards for science, planning and providing professional development for teachers, providing math/science leadership, facilitating the Visions and Dreams program, and building networking and collaborative relationships within and between different agencies. My participation in the consortium has been a tremendous learning experience for me. I'm better prepared, more confident, and better able to do the work that I do. I've become more knowledgeable about how to facilitate the development of local science standards. I feel empowered to plan and conduct professional development aligned with our curriculum. I've been positively challenged to look at assessment differently. I've taken personal responsibility to guide and facilitate discussion in using multiple assessments in the classrooms. Collaboration with the consortium has also forced me to be more resourceful, to more creatively use what is available. I've become more proactive in the design and implementation of professional development and other training activities. I'm very excited about the possibilities that have opened up in helping me to meaningfully connect with the top people in education—the teachers. I know that if I can provide them with the tools and strategies, they can move and motivate students!
> —*Vignette #33*

Still another state-level trainer, a mathematics content specialist from the Pacific Region, was able to talk about the way in which helping trainers improve their own professional practice leads to changes in teacher practice:

> To me, the most significant impact of the consortium is that it has helped teachers to change their teaching strategies from predominantly teacher-centered instruction to student-centered instruction. I have seen significant changes in teaching practices throughout our schools. I'm also looking at classrooms differently as a result of my involvement with the consortium. As a result, I'm able to help teachers think differently about teaching strategies, questioning strategies, grouping strategies, and classroom activities. For example, teachers are using more hands-on activities and manipulatives with their students. They are trying out different questioning strategies, using questions that require the students to do more thinking. Teachers are now more concerned about how students came up with the right answer, and not just the answer alone. Teachers are also incorporating authentic assessment and are changing their report cards in ways they think give a clearer picture of the students' learning. It's not a finished process. We still face many challenges. I know they and I still have a lot to learn, but I believe we are on the right path.
> —*Vignette #34*

- **Trainers from institutions of higher education served**. A mathematics coordinator for a technical assistance center located at an institution of higher education also serves as a trainer for the consortium in the Appalachia Region. She had this to say regarding the impact of her own training in allowing her to assist teachers in assessing whether their curriculum and instructional practices were aligned with standards:

> I went to the Learning from Assessment professional development opportunity and learned a great deal. The training was using a model for determining if a curriculum is aligned with national or state standards. This fits really well into the mission in our state that teachers need to be able to assess if their curriculum is aligned with the standards. I have used this model in the professional development sessions I have conducted and have probably trained more than 200 educators on this process. I not only provided information to educators on aligning their curriculum with the standards, but also in determining if their instructional practices were aligned as well. I believe the materials I received from the consortium have been very helpful in providing teachers with an opportunity to reflect on their assessment strategies and determine if they are aligned with the standards. The consortium has done a wonderful job of making sure that their training is aligned with the goals of our state. We get the national perspective in terms of the standards and then adapt it to our goals.
> —*Vignette #35*

This same trainer went on to comment on the role of the consortium in the Appalachia Region in helping her to stay abreast of innovative models and strategies for providing professional development:

> The consortium has provided me with new, innovative models for providing professional development. Through my work with the consortium—as a trainer and team leader for the Regional Training Project—I have experienced first-hand how to provide professional development that fits both the needs of my organization and the needs of our state. This has been truly valuable to me to continually improve on how I provide professional development by modeling what I receive from the consortium. The professional development was useful, innovative—yet practical—and aligned with the mission of our center and the state. It allowed me an opportunity to gain knowledge that I could then share with others. When I provide professional development, I am using the innovative models and strategies that I learned from the consortium. This helps to support my efforts at the center.
> —*Vignette #36*

- **Trainers from professional associations served.** The regional consortia also work with professional organizations on training issues. The director of a professional organization in the North Central Region discussed how the train-the-trainer model was particularly useful in enhancing the knowledge of someone who is responsible for assisting teachers in so many different content areas, and the ways in which this empowered those teachers to assist others:

> The collaboration with the consortium arose out of a grant that we were given to assist public school teachers in the seven school corporations that I work with in the use of technology in advancing mathematics and science. Part of my job is to help the people that I represent to grow and develop more professionally. I am not an expert in all curricular areas, and so sometimes it becomes very difficult for me to know what we should be offering or what help we should provide. Being involved with the consortium and being involved with this collaboration added significantly to my understanding of

things I didn't know about until I had gone through some of the trainings and in-services that the consortium staff provided. It made it much easier to design and offer professional development opportunities for the 1,600 teachers that I represent. I think that probably the strongest outcome from all of this is that the teachers that we had involved in this collaboration have now gone back to the school corporations and into their buildings and trained other teachers. It has been very much a domino effect. Another outcome that I can point out to is how it has fired up some of the teachers that I represent to go ahead and move in directions they hadn't moved before, to try things that they hadn't tried before. I think that the most positive outcome was that it really leveraged and increased the quality of instruction that is offered to the children here.
—*Vignette #37*

- **Teachers learn to be trainers.** Regional consortia also train teachers to train other teachers. A high school science teacher in the West Region described how preparing teachers to be trainers can help an entire district:

> The consortium has supported our district by providing Learning from Assessment workshops, with the goal of providing teachers with the tools they need to align their math curriculum and assessment with the standards. I've participated in the LFA training-of-trainer workshops. Since then, I've been helping my district to hold workshops for other teachers so that that they can understand exactly what our students are going to be tested on. Now when I hold professional development workshops, I can make sure that the teachers in my district understand how the test questions are going to be written, and they can go back to their classroom and make sure that they're teaching it correctly.
> —*Vignette #38*

A state science coordinator in the Far West Region talked about the way in which an initial training for a relatively small cadre of teachers can lead to manifold returns in the total number of teachers that are prepared as trainers:

> The consortium helps us with our Phase II elementary in-service, where we cycle through on a three-year cycle to each grade level, doing grades K-1-2-3-4-5-6, and repeating the cycle. All 40 of our state's districts participate in this in-service, where the constructivist strategies being taught help students to develop an understanding of science process skills as defined by the intended learning outcomes in our state. It's the hands-on, minds-on model where we try to connect the learning in science to an experiential base. This in-service program trains a cadre of about 100 to 110 teachers each summer in an intensive workshop that the consortium has been supporting for the past six years. Then, using state monies, we send the teachers back to their districts, where they train additional teachers. It's a model where we build the capacity of our cadres in the summer through intensive training. About 100 teachers that are trained in the summer typically turns into 3,000 trained teachers by the end of the school year.
> —*Vignette #39*

Another teacher, this one from the Southeast Region, also commented on the ways in which the transference of skills and knowledge from one teacher to another builds upon itself:

> From the beginning, my participation with our regional consortium has strengthened me as a classroom teacher in helping me to align my curriculum and my classroom instruction with the standards. But I've also been able to take that to a much broader audience. I worked for an entire week with one of our state universities (through a National Science Foundation grant our school district received) to provide a series of

workshops for secondary science teachers on a standards-based instructional model. I was able to deliver those sessions using consortium materials, using a workshop that had already been proven successful with teachers, and then deliver it again to another group of teachers, with the intent of their changing their classroom practices.
—*Vignette #40*

In summary, as the education director for a special science program in the Southeast Region noted, the train-the-trainer model employed by the regional consortia plays a significant role in preparing trainers at all levels:

> It was my training ground. It was the way I was exposed to nearly every aspect of what I was going to be expected to do. It was really vital. The most significant thing I'll always be grateful to the consortium for is my professional development in being able to understand my job and help me work more effectively as a trainer. It exceeded anything I could ever expect because I didn't know that I would be so well prepared to do this particular job as a result of my being in the Academy.
> —*Vignette #41*

8. Effective Technical Assistance and Training

This final vignette illustrates the wide-ranging impacts of the technical assistance and training that is provided by the Eisenhower Regional Consortia. It demonstrates the consortia's capacity to enhance teachers' ability to align instruction with state standards, to deliver effective instructional strategies that motivate students to learn deeply the material that is presented, and to become instructional leaders for assisting other teachers through the consortia training. The vignette also shows how the services that the consortia provide have a rippling effect—which affects education in deeper, more systemic ways that go beyond the initial training and technical services that were delivered. An award-winning mathematics teacher in the Southwest Region explained:

> The consortium worked with a group of Master Teachers in our state. Some of them are presidential awardees from past years and others are just known as leaders in their school or in their district. The training certainly helped me to improve the way that I teach. It gave me a lot more ways and things to incorporate into my daily routine as a teacher. I've been teaching now for 17 years and when I started out, I was very book-oriented. I didn't care what the curriculum said—if I was on page 30 one day, I was on page 31 the next day. Because of my training, I've come to understand that aligning instruction with standards is the whole point. I don't go from one topic to the next just because it's in the book that way—instead, I do what makes sense to the kids.
>
> Additionally, the training has given me a lot of tools to be able to appropriately pace my kids. Kids get through the curriculum and, being a Title I school, we have a lot of at-risk kids, so that's a major accomplishment. Now, students are working at a much higher level whenever they have all those manipulatives around to work with; it helps with their thinking skills. And—this is part of what I learned from my work with the consortium—memorizing is nice, but what you really want to do is teach students thinking skills and help them understand the process they're going through. Then, students understand why the math works like that. Instead of me saying, "Don't worry about that, just follow these three steps and solve the problem," they understand the three steps that they are going through and the reason why. Additionally, I think student engagement is most important because if they are not interested, they sure are not going to do anything. I mean, that's why you improve your instruction, or make the curriculum better, or assess differently—

to make the whole thing more interesting. And that way, students want to learn and they do.

I'm trying to influence others through my leadership at the school, my district, and in the workshops I do for the state. I try to show other teachers how to be a good teacher and tell them why it's so important. I make them copies of my materials and take time to show them things the kids will like. So, I'm telling other teachers, and my principal, and the parents about the importance of improving the way we teach. There are at least 50 teachers in this state that are, or were, in the Master Teachers program. Each of them helps a few more teachers. We are changing what we do; at the same time we are letting more people know what we need to do to be good teachers and why.

The consortium has made more people know how important it is to get students to want to learn, to "teach curiosity" like the consortium staff member always said. The consortium has also made a difference in attitudes. For instance, my principal has been very supportive. She is a former math teacher so she's behind me. But other people's principals, who are hearing some of what we are learning, are more supportive of teachers who want to upgrade the way they teach. And, instead of refusing time off for meetings and things, they encourage teachers to go and make it easier for them to do so. There's no problem about release time for any of the Masters Teachers activities. My district is very supportive. And that might not have been true if it weren't for the consortium.
—Vignette #42

B. Dissemination

The Eisenhower Network offers a unique service by providing a point of contact where educators can learn about and access regional and national resources for mathematics and science education. Dissemination activities are designed to improve participant practice and student engagement and performance by providing resources to improve curriculum and instruction, such as information about exemplary and promising practices in mathematics and science education.

Earlier Network evaluation reports have relied upon quantitative data to document these activities and their impacts. This section presents vignettes created from in-depth client interviews to further illustrate the scope and nature of the dissemination activities and the impacts these activities have had on our clients. It is important to note that the client interviews were not originally designed to elicit outcomes of dissemination activities; however, it was possible to glean relevant information from clients' comments about the roles the consortia and clearinghouse play, and the unique benefits the Networks provides.

The following vignettes describe how clients value both the quality and utility of products developed by the Network or supported in collaboration with other organizations. These vignettes show how clients see these dissemination activities as providing unique resources, supporting product development, enhancing product dissemination, and changing practice.

1. Unique Resources Provided

A statewide systemic initiative project manager in the Northeast and Islands Region shared how products impact policy makers:

> The consortium is a great source of information funneled from the national level and a point-of-contact for the regional level. The consortium has provided us with information and professional development on TIMSS, effective professional development strategies, and strategies for using data. Some of those were unique materials, and if the consortium hadn't done it, who's to say that it ever would've been done? It's been great to have a nearby partner creating products and services that we can use here, particularly for issues or topics that, frankly, are important, but peripheral enough that we don't get to it; where our state has some difficulty doing it, and enough of the states in the area all recognize that we're having trouble, but we know it's important. Somebody needs to do it, and it's nice to have that regional entity that can respond to that. The consortium has done a great job at creating the program, tool, or product that fills a need many states have identified, therefore preventing duplication.
> —*Vignette #43*

A district program consultant/content specialist in the Pacific Region shared how the consortium provided much needed materials that added value:

> Schools look to me to provide training on content, pedagogy, and current educational issues. It's not always possible to provide the needed materials and information, or at least it hasn't been in the past. Fortunately, because of our involvement with the consortium, local initiatives and activities related to standards-based education have been carried out. This is critical because the local resources are insufficient to support these activities. The consortium has allowed us to provide materials from several different organizations. These materials identify effective teaching practices, support quality professional development, and provide ideas and material for standards-aligned curricula.
> —*Vignette #44*

A technology coordinator for a public high school and a coordinator for an ENC Access Center in the Appalachia Region shared how high school students have used Network-developed materials:

> Our high school was selected as a site to house an ENC Access Center... We not only offer the resources to educators, but our students have access to ENC resources as well. These high school students are doing research that most college professors would only dream of doing. A few years ago, I was asked to work on a landfill issue for our area. When approached, I said that I wanted my students to work on it. Two of them attended every meeting and studied the problem using resources from ENC. They recommended if we recycled plastics, the landfill space would decrease by about 25 percent. A year later, a major organization came out with a very similar finding. We were ahead of them by one year!
> —*Vignette #45*

A central district director who has worked with ENC shared how resources have informed teachers:

> I look at ENC resources mainly for national and science standards and curriculum materials. ENC makes information available to science educators quickly. The information is condensed, and the magazines and publications are current. Once teachers know that ENC is here, they are a resource for a teacher in the classroom, especially if that teacher has online access. The information is right, available, sorted, and at one site. Teachers do not have time to sort on their own. And, think about teachers who do not have connections with computers. ENC's Focus and other publications connect teachers without computers.

—Vignette #46

2. Product Development Supported

A state science consultant in the North Central Region shared how the consortium assisted with the design and development of an equity toolkit:

> One of the projects I worked on recently with the consortium was the Connecting With the Learning Equity Toolkit. The consortium provided technical assistance to the state and to a lot of our professional developers in helping with the development of professional development for the toolkit. They also helped with the design and production of the toolkit. Most recently, they helped with the evaluation of the toolkit with teachers in the Midwest. If it had not been for the consortium, we would not have been able to get the toolkits printed, and we wouldn't have had quality products if it had not been for the services and support of the consortium. By us being able to produce a product of such high quality, we were able to generate a lot of interest and participation in workshops related to the toolkit. We still get calls from all over the United States and people who want to use it in their school districts. Much of that was done because of the leveraging of the work done through the consortium.
> *—Vignette #47*

A mathematics coordinator for a technical assistance center located at an institute of higher education in the Appalachia Region shared how the consortium supported the development of a product with the center:

> The consortium has supported the development of materials that address specific needs of our state and region. I collaborated with the consortium in developing a graphing calculator product. This product was essential in terms of equity for all students. I have used the graphing calculator and K-8 building blocks materials extensively. Not only does the consortium provide materials that can be used across the region, but also within our region they have provided a consistency in terms of the training packages that allows for a statewide training mechanism. I believe that the consistency factor is very important there.
> *—Vignette #48*

3. Product Dissemination Enhanced

A secondary science teacher specialist with a state department of education in the Far West Region shared how the consortium assisted with the dissemination of their product to reach teachers statewide:

> The state office of education recently developed an Earth Systems high school science course. The consortium provided the technical assistance to put all of the lesson plans on the Web, so they are available to teachers statewide. The course contains inquiry-oriented, activity-based lessons. The consortium put our Earth Systems methods course online to help teachers implement the lesson plans. The online lessons model instructional practices espoused by the National Science Standards. Because there are very few lesson plans and no textbooks aligned directly with the state core, teachers were scrambling for resources. I've had many teachers express appreciation for the fact that there were Earth Systems lesson plans tied directly to the state core that were easily accessible. If the lesson plans weren't put on the Web, the teachers wouldn't have accessed them.
> *—Vignette #49*

A client associated with a non-profit organization in the Mid-Atlantic Region shared how the consortium assisted with the dissemination of a professional development product that allowed them to reach a greater number of teachers:

> By networking with the consortium, my organization was able to expand the dissemination of a professional development video series based on national mathematics and science standards. The videos are broadcast on a television channel that can be reached by half the schools in the country. Print and Web-based materials that accompany the videos encourage teachers to reflect on their own practice. The video classrooms represent broad geographical and racial populations. As a member of the consortium's regional board, I was able to make the materials available to all of the board members. One of the most significant outcomes of this networking with the consortium has been the engagement of teachers in workshops in 200 sites across the country. The number of teachers we know we are reaching increases every semester. The consortium's strength in this is its ability to promote interstate activities and share materials amongst states by providing an opportunity for individuals to network, and their unique contribution is the advocacy of the consortium for the teachers to use the materials. A number of teachers would never have known about them without the consortium's involvement. The end result is that a larger number of teachers are more aware of standards-based education.
> —*Vignette #50*

A professional development provider/regional service provider in the North Central Region discussed how resources were used in an equity workshop:

> We have used a number of the consortium's resources. We just finished an equity workshop, and they have an equity toolkit which is excellent. We have used bits and pieces out of that for some of our presentations. When people call with equity questions, we suggest that as a resource. They have something called Science T.R.E.E., which allows teachers to design their own science units. We've shared that with a number of science people who are science staff developers for their school districts, usually the larger districts, so they can inservice their teachers on how to use this. They do have wonderful resources that are available; so we have taken advantage of those. The products they produce are very valuable.
> —*Vignette #51*

4. Products Change Practice

A science coordinator with a public school district in the Far West Region described how materials from the consortium enhanced her effectiveness in serving teachers:

> The publications that come out from the consortium are valuable. They come to me, and I pass them out to teachers who might need various things. They send me a catalog of what's available through the consortium; they also send me booklets once in a while, and ENC stuff, math and science, is valuable. It lets me know where I can go to get things, or what other people are doing, or where the departments are that we can connect into, so I find that very useful. I think that it's been a good resource for teachers, like it has been for me. They use it primarily in the same way I would. The information from the consortium has helped me do my work more effectively. It helps me to be knowledgeable about what's going on in other states and what are best practices there, and those types of things. It helps me to do my job better. Anything that I can draw upon, that I can pass on

> to my teachers, helps this job be better. That's my whole purpose, to be of service to my teachers, and so the more that I know and understand and know where to get things, or how to do it, then I can pass that to them, and that consequently affects our students.
> —*Vignette #52*

A university professor in the Southwest Region shared how a Toolkit for Alternative Assessment disseminated by the consortia enhanced his teaching pre-service teachers:

> One of the things we received was the Toolkit for Alternative Assessment, and I've grown so attached to it that I can't leave home without it. It's the best of any materials I've ever gotten in connection with anything. By now, I've given four workshops on alternative assessment, or on assessment period, and I've always given the toolkit. If others just got the toolkit without my teaching, they would still be way ahead of everyone else. I really can't say enough about the toolkit. I did not ever expect assessment to be an area of interest or expertise, but it may be my favorite workshop to conduct.
> —*Vignette #53*

An educational program materials specialist for a NSF-funded technical assistance provider in the Appalachia Region shared how becoming an ENC Access Center improved their capabilities to provide standards-based professional development:

> The consortium is a link to national-level products on mathematics and science education. Serving as an ENC Access Center has allowed us access to quality materials for my use and in my training sessions with educators. When I do my training sessions for ENC Access Center, I pull instructional and assessment strategies from the various ENC materials and I use them as demonstrations in the training, showing educators how they can use these materials in their classroom and where they can access the information from ENC. This type of strategy works well in our state. Our state standards are aligned with the national standards. ENC materials are aligned with the national standards. Therefore, I can use nationally focused products that are aligned with my state and schools. Through their role in dissemination, the consortium has raised the level of awareness of seasoned teachers. The consortium provides a lot of materials and resources to all teachers, but I feel that they also provide an opportunity for seasoned teachers to get up-to-date on the latest developments in mathematics and science education.
> —*Vignette #54*

A regional service provider in the Northeast and Islands Region discussed how the consortium provided resources that enhanced the organization's ability to deliver professional development:

> The consortium has been a great resource to me. They've got a lot of tools and resources that they help me become aware of and use. When there are products that come out from the other Eisenhower Consortia, [the director] is really good at making those available. Specifically, the resources and expertise available at the consortium on professional development and using data have really enhanced the work of my whole organization. I attended a session on professional development at a conference, early on when the professional development book, *Designing Professional Development for Teachers of Mathematics and Science*, was in draft form. Learning about that book and how it can be used in our organization to design effective professional development was a learning experience for me, which then I was able to take back to our organization. We were able to get the book when it came out in print, and we were able as a staff to design some internal, professional development around the book. And now, I mean, that's our guide.

> We use that book in all the work we do and that goes back to being introduced to that book through the consortium. And the same thing would be true with the consortium's data book.
> —*Vignette #55*

A state science supervisor in the Northeast and Islands Region explained how the consortium provided information that helped influence state policy around standards and curriculum frameworks:

> In the eight years that I've collaborated with the consortium, they have assisted us in ways that have had a tremendous impact on the services we provide to the school districts in our state. Because of the consortium, we have been able to provide our state with print resources and comprehensive professional development that we wouldn't have been able to otherwise. The consortium provided all the districts with copies of the Professional Development book, and the Equity Manual that our consortium state team created the year before, as well as copies of ENC Equity CD, and all of the rich resources that come out of the Eisenhower Clearinghouse. The consortium provided support that enabled us to create addenda to our state frameworks and distribute them to all schools in the state. If it wasn't for the small amount of money that the consortium provided, in terms of helping us put those addenda together, the districts would not have had any context for interpreting those standards. More significantly, it helped us, because of those addenda, identify needs in the pre-service preparation of teachers, and as a result of that and lots of other activities, we have new policies now in the state that reflect standards that have been identified in our framework, but also standards that have been identified in those addenda.
> —*Vignette #56*

C. Collaboration and Networking

Collaboration and network building is another major service area addressed by activities of the Eisenhower Regional Consortia and Clearinghouse. This service is intended to encourage communication, collaboration, and shared activities among various client groups in order to enhance working relationships and build professional alliances. Activities can include referrals, sponsoring meetings and conferences, providing resource information that enhances communication and collaboration, supporting communication networks among working groups, and providing seed money for collaborative efforts.

The Eisenhower Network's collaboration and networking activities were designed to improve participants' practice and student performance through increased access to resources, increased coordination of services, leveraging of resources, and strengthened relationships. Earlier Network evaluation reports have relied upon quantitative data to document these activities and their impacts. This section presents vignettes taken from in-depth client interviews to further illustrate the scope and nature of the collaboration and networking activities and the impact these activities have had on our clients.

The client interview data are found to be consistent with the larger-scale survey data reported previously. In response to a series of closed-ended interview questions, approximately nine out of ten collaborators reported their collaboration with the Network strengthened relationships, helped them to work more effectively, increased access to resources, and/or leveraged resources for greater impact. The same number reported this collaboration met or exceeded their expectations. Approximately eight out of ten reported their collaboration with the Network increased service coordination and/or provided benefits not otherwise afforded. The Network's

collaborative work had lesser, though still notable, impact on policy: six out of ten collaborators reported that their collaboration with the Network informed policy decisions.

Illustrations of the scope and nature of the Network's direct collaboration with clients can be found in comments recently offered by an associate director of a technical assistance center from the Pacific Region:

> I've been actively engaged as a collaborating partner in the consortium in a variety of ways: in planning and product development; in collecting and analyzing impact data; in planning and delivery of professional development for the Consortium Leadership team and through work on Pacific Standards. The key theme I see running throughout the work is one of networking and collaboration. Our collaboration has grown in a way that has allowed us to successfully navigate a rocky start to achieve true collaboration at all levels. We have been able to work through the rough parts of organization functions, priorities, territories – the politics – to achieve a successful collaboration. I believe that our collaboration increased coordination of direct services to teachers in each school system we worked with. Better collaboration and networking meant increased access to resources, in the sense that we were able to better leverage available resources to achieve maximum impact. Perhaps best of all, through enabling staff to more clearly communicate the results of what works, we have informed policy at the top levels. For the first time in over 20 years of working in the region, we have a common vision and sustained efforts at achieving that vision. It's an exciting time.
> —*Vignette #57*

In addition to direct collaboration with clients, the consortia also promote collaboration and network building by supporting the work of other providers. The value of this support is illustrated by the comments of a mathematics/science coordinator from the Mid-continent Region:

> We had direct resource support from the consortium that allowed us to offer workshops to teachers and to disseminate information around standards-based education. We were able to use this support to bring teachers together to share ideas, give them materials they could actually take and use in the classroom, and even follow up with them to see how things were going and how they were using the materials. The biggest impact was getting teachers to use more hands-on activities in math and science instead of just having the kids do algorithms or a cookbook lab. We were able to move them to the next step. We would not have been able to do that at the time and now we definitely wouldn't be able to with the budget shortfall that's coming.
>
> Our district is also fairly large and we have all these different programs going on with really no coordination of that information. Increased coordination was one of the things that we were able to do with this support. For example, we have PRISM kits that are designed by teachers for use in math and science. The resources from the consortium allowed us to help set up a process for the dissemination of those kits. Along these lines, it really helped us to be able to say, "look we've been able to strengthen the knowledge base of teachers and supply materials with the help of the consortium."
> —*Vignette #58*

During the course of reviewing consortia client interview responses, certain response patterns began to emerge. Responses to collaboration and networking probes seemed to focus in the areas of relationships, reform, and resources. Indeed, when collaborators were asked to identify the most significant outcome of their collaboration with the Network, the most frequent responses

were categorized around the following three impacts: strengthened relationships, reform synergized, and increased access to resources.

1. Relationships Strengthened

As stated before, many of the consortia activities were designed to improve participants' practice through strengthened relationships. During the interviews, many clients mentioned that these relationships consequently made it easier for stakeholders to share ideas and expertise and for teachers to increase their leadership skills.

A science supervisor from the Appalachia Region described what she saw as an outcome of the consortium's work:

> Teachers having the opportunity to network with other teachers when they attend training workshops sponsored by the consortium has been the most significant outcome of the work the consortium has done. When teachers get together, they will often realize that they have access to quite a bit in their own school district. I believe that teachers are pretty isolated in their classrooms, and when they come to these training workshops, they get an opportunity to share so much with one another. During the workshops that I've conducted, they will often exchange e-mails and phone numbers with one another, and we encourage them to do this.
> —*Vignette #59*

An administrator for a public school system from the Southeast Region also shared comments on how relationships have been strengthened in their region:

> Involvement with the consortium has strengthened relationships at several different levels. It strengthened relationships between the leadership in the consortium and the leadership of the reform effort in the district. It strengthened relationships between teacher leaders and other teachers in the district. It strengthened relationships between teacher leaders and school principals. It built an infrastructure that allowed us to move forward with the reform agenda, and it definitely increased the leadership capacity of our teachers, and it also helped afford those teachers to get a deeper formulation of what the reform math and science classroom should look like.
> —*Vignette #60*

The following comments from a mathematics and science administrator in the Far West Region illustrate that relationships established through the Network's collaboration and networking activities are effective at overcoming the isolation felt by stakeholders and yielding successful results for teachers and students:

> For six years, I've been trying to get all eight schools to come together and do a community science fair. These schools are all different kinds of schools. There are BIA, Catholic mission, charter, tribal, and our public school district, and they have not communicated together at all in the 30 years that I've been involved in the community. And what the Tribal Coalition did was come in and provide a forum and use the consortium to bring representatives from each of the eight schools together, and we met every month and sometimes twice a month. That was one of the very positive things that occurred, bringing these people together to talk, every month, and finally working through their isolation. The worst enemy of tribal teachers is isolation, and so that's where I've seen the very best from the consortium! As a result of bringing people together, it's helped people to realize that everybody has the same problems, and to start working together and talking together. We later involved the teachers from these schools

> in three-day, outdoor workshop where they did hands-on science activities. And I saw more light bulbs go on, because most teachers have been brought up in the traditional way where you teach in a classroom, you don't go outdoors where you don't have control over the kids. And whereas earlier I had had such a difficult time convincing them that this is what we needed to do, the workshop helped them realize they were ready to do it. And that was the turning point. They finally decided they could really do team science projects all year long and then go to the science fair. And through the consortium's help, and through staff and the Tribal Coalition, all eight schools came together to do a science fair for the community, and we ended up with over 900 kids, and just couldn't believe the success in it. And the group has survived, and this February we'll have a second science fair, and we're going to make it a two-day event instead of a one-day, so that the schools can tour and all that.
> —*Vignette #61*

An elementary school teacher from the Northeast and Islands Region also spoke of the strengthened relationships between teachers in their region:

> As an intensive site, we got to network with other teachers from our state and from all of the consortium schools at one state meeting and two regional institutes. It was really great to get together with the state team, and share ideas . . . it was wonderful just to share success stories, or, you know, what didn't work. Especially when we were just starting out trying to write a curriculum and we were able to get together with people who had done it. And just for them to say, "try this, try this, but don't bother with that." So it was really good to have a chance to talk with colleagues in that kind of forum. I mean, just to spend four days with people who are really excited about improving their schools was uplifting for our whole team.
> —*Vignette #62*

The following comments from a state supervisor in the Mid-Atlantic Region also illustrate strengthened relationships that enhanced working relationships and professional alliances:

> Through the state team, we can deliver professional development regionally (across the state). An enormous amount of planning is involved in the regional delivery of professional development. One regional collaborator talked with another region to build his model for alliance. The coordination for delivering professional development and cooperation among districts has increased.
> —*Vignette #63*

2. Reform Synergized

In addition to client comments on strengthened relationships, many also spoke of reform or improvement efforts they have seen in their region as a result of the collaboration and networking activities of their regional consortium. Regional consortia contribute to systemic reform by convening key stakeholders to collaborate and plan efforts. The following highlights from client interviews illustrate the Network's impact on reform efforts.

A mathematics coordinator for a state department of education in the Appalachia Region spoke of reform efforts in this region:

> I am on the consortium's regional board and a state steering committee. We have met throughout the years to focus on mathematics and science reform issues. These meetings

serve as a key way for us to network. This type of networking strengthened our ability to better enhance the reform effort in our state and the region. By bringing the key players in mathematics and science reform together (across the region and within each state), we each shared what we were focusing on and we learned about the big picture. Anytime you have a guided opportunity to reflect and share, you come away more aware of the big picture. My participation in these activities reinforces or gives me direction that we are heading down the right path in terms of mathematics and science reform. We learn that our services and products are going in the right direction. In addition to their efforts to convene and connect stakeholders, they also link us with a sub-set of a national program. We have our state and regional perspectives, but the consortium brings us out of "us" and allows us an opportunity to look at the national picture and how we fit in. Without the consortium, we would not have been able to meet and make the connections across our organizations.
—Vignette #64

And, a state science supervisor from the Northeast and Islands Region also spoke of the impact the consortium has had on systemic reform efforts in this region:

> The consortium has been a valuable resource in many ways, especially having access to their expertise, but for me, it's mainly meeting individuals through consortium activities that has been most useful. In the last couple of years, the consortium director set up a series of meetings with the Eisenhower Coordinators from all of the states in our region. To me, it was a support opportunity when the Eisenhower Coordinators would meet, because we were struggling at a time when we were doing consolidated applications, and none of us were sure what that meant, and there was fear that the science and math professional development piece would be lost in that whole attempt. And so those meetings . . . were very, very crucial at that time. The knowledge that I got from those meetings and other regional conferences I've been involved in, all helps me leverage change, and we've had dramatic changes in things such as developing standards for schools, developing new standards for pre-service teachers in the state, leveraging the necessity to have state testing of teachers in science content areas. And you know, a lot of these leveragings came about through meetings and collaborations with people who participate in the network that the regional consortium helps support. The consortium provides me with a resource that I can use to help me gain more knowledge or resources, and for me, that makes me more effective.
> *—Vignette #65*

Many collaborators also attended professional development sessions offered by the consortia. One higher education faculty from the Southwest Region described how these sessions enabled participants to network across multiple states:

> I do pre-services for teachers —I teach teachers-to-be…Because of attending the Fall Forums (professional development sessions), I have made connections with people across the five states—with people in various capacities—they were all very, very different even though they were all math and science. There were also people from different universities and school districts— all at different places in their reform movements. We've been able to take our individual ideas and develop something even bigger and better from a conglomeration of the ideas. It introduces people, and agencies, and other people to each other so that they will know how to get things done the next time they come up. And they keep us all current on what is new and important.
> *—Vignette #66*

A curriculum director from the North Central Region provided an example of how the Network's efforts have supported regional reform:

> We have been designated as an intensive site for the past four years. The consortium has collaborated with the district and provided technical assistance in a variety of ways, both in mathematics and science. They have assisted us in delivering the staff development and were instrumental in doing an analysis of our curriculum and making sure that our curriculum was in line with the state standards. This collaborative relationship has enabled the curriculum department in our district to coordinate the mathematics and science curriculum so that we are not operating in a silo with each of those programs. Our partnership with the consortium has brought credibility to our curriculum. It has allowed our board members to ask some really hard questions about curriculum. The board has approved both the math and science curriculum frameworks. That sends me a message that we feel we are on the right path and the board appreciate the partnership we have with the consortium.
> —*Vignette #67*

Mathematics and science initiatives in the Mid-Atlantic Region, too, have been impacted as a result of consortium support. A curriculum coordinator from this region characterized the impact as follows:

> The consortium has provided access to resources and allowed us to work with schools because we can say we are part of the large consortium. Through networking on the team, my staff have become known to the state department of education and have gained access to resources for mathematics and science initiatives. In sum, collaboration on the state team increased communication across the state, created alliances and partnerships with informal science institutes, facilitated work with the state department curriculum supervisor, all of which would not have happened as easily without the consortium.
>
> Participation on the team has had immense impact on the work of this organization. We became an ENC Access Center and, most recently, purchased two STAR LABs, a portable planetarium, and now are running our tails off providing professional development. Teachers are using it, and it's made its way into schools' curriculum. We've put programs into schools that wouldn't be there without the professional development in the collaboratives that were developed and supported through the state team.
> —*Vignette #68*

3. Access to Resources Increased

The Network's collaboration and networking activities have also brought about increased access to resources and leveraging of resources, as was previously mentioned by a curriculum coordinator from the Mid-Atlantic Region. Evidence of this can also be found in the following excerpts from client interview data.

A principal investigator for a systemic reform initiative from the Far West Region commented on the leveraging of resources brought about by their collaboration with the regional consortium:

> When we first started this NSF-funded systemic initiative in the developmental stage, we organized an advisory board, of which the consortium was one of the first members. Because the initiative represents 28 tribes in four states, and we're very rural, this led to a very complex set of needs that we had difficulty addressing very well until the consortium came in to help us with the transition to a partnership council. One of the

reasons why we evolved into a partnership council was to try to coordinate services. By facilitating meetings and bringing together the professional development providers, the consortium was instrumental in helping us formulate and keep the partnership council alive. This helped bring the resources to bear on the needs of initiatives. I mean there were major changed in our ability to do things as a result of that. For example, we got many resources from our other partners having to do with professional development on curricular alignments, professional development on leadership training in particular. By helping us coordinate our partners, we got much more direct benefit to our coalition and schools because we were able to cull from the partnership better focused resources that we hadn't identified before. I think that having the consortium as a major partner increased our efficiency as an organization, and thereby we were able to impact more quickly reform at the local level. So I think that this early intervention really helped move the reform process along.
—Vignette #69

A principal for a middle school from the Southeast Region described how their collaboration with the consortium leveraged resources to assist the building of a multi-million dollar science center:

When we were building our environmental center, the consortium was able to connect us with people that had expertise in different areas, like environmental concerns and those kinds of things, so that we were able to get their assistance in planning and developing and building that center. The environmental education center which is actually about a $6 million facility that we would not have been able to build without the consortium's assistance and other partners. But I think just having the consortium as that base to build on, and to say that the consortium was behind this project, and they were helping us to develop it, brought a lot of the other partners in and helped us to acquire the resources that we needed to build the facility and to carry out the mission that we had started with.
—Vignette #70

Increased access to resources was also highlighted by a public school principal from the Southeast Region:

We would all be out there struggling on our own without some guidance and leadership. The consortium brings us the leadership and brings us together so that we can have the coordination. We're not all duplicating resources in each of our separate regions, but we're sharing and learning from one another. I learned about math and science approaches and directions they were taking and initiatives, and brought those ideas to my faculty. Through our sharing process and our networking at board meetings, I was able to learn about resources that were being used in other districts in other states, and then call upon those resources myself. For instance, I was receiving the brochure on the clearinghouse (ENC) materials, but I wasn't familiar enough to know how you can use and order these materials. And through networking with others, I learned about resources that were very beneficial at the school level.
—Vignette #71

A state science supervisor from the Northeast and Islands Region also noted how access to professional development and print resources from the consortium enabled participating districts to coordinate their efforts:

In the eight years that I've collaborated with the consortium, they have assisted us in ways that have had a tremendous impact on the services we provide to the school districts in our state. Because of the consortium, we have been able to provide our state with print

> resources and comprehensive professional development that we wouldn't have been able to otherwise. The one really significant effort that was most helpful to me was a series of four workshops that we were putting on, that the consortium director helped us plan and organize, and provided direct services and resources. That had a tremendous impact because we had over half the districts in the state participate in those four workshops. It was phenomenal. It gave them an opportunity to network, but also to coordinate efforts that schools in districts were doing in isolation from others in the same district. And the consortium provided all the districts with copies of the Professional Development book, and the Equity Manual that our State team created the year before, as well as copies of ENC Equity CD, and all of the rich resources that come out of the Eisenhower Clearinghouse.
> —*Vignette #72*

Thanks to resources accessed through the Network, educators are able to do their jobs more effectively, as evidenced by the following statement from a state-based professional development provider in the Northeast and Islands Region:

> Last spring, I attended a two-day workshop on Case Studies so that I could share that approach to ongoing professional development with the teacher leaders I mentor. It was wonderful to have an opportunity to participate with other professional developers, or people who work on a larger scale than just the school or district scale, from other parts of New England. In that way, the consortium holds a unique role, in that there isn't a lot out there for support and professional development for the professional developers. You know, it's an isolated bunch. And it's those networking opportunities that make it possible for all of us to do our jobs better.
> —*Vignette #73*

As confirmed by these interviews and survey data collected in previous years, the Eisenhower Network has had a significant impact on collaboration and networking among its clients. In addition to strengthening relationships and supporting reform efforts, the Network's collaboration activities have resulted in greater access to resources and increased service coordination. These collaborations are valued by stakeholders: over 80 percent of interviewed clients feel that the collaboration has met their expectations and/or provided them with benefits not otherwise afforded.

IV. Conclusions

The Eisenhower Network evaluation was undertaken to describe the activities and impacts of the regional consortia and national clearinghouse program, as well as to highlight areas for improvement and change. Overall, the evaluation findings indicate that the Network has taken great strides toward enabling effective reform of mathematics and science education. The Network has been delivering high-quality services to educators across the country on a large scale, and Network products and services have been rated highly by clients. However, the evaluation has also been helpful in identifying possible areas for improving performance, such as increasing the proportion of intensive services. This final section of the report focuses on overall conclusions from the five-year Network experience.

The most global learning from the Network experience is that moderately funded entities with expansive mandates can establish themselves and survive as productive members of the mathematics and science community. This finding may seem obvious in 2001, but it was not so predictable in 1992 when the Network was first funded. Just gaining "a place at the table" within this already well-defined community is an accomplishment that is attested to by the Network advisory groups, clients, partners, and evaluation results.

In addition to confirming the quality and effectiveness of particular consortia services, the evaluation, particularly the client interviews, revealed an overarching theme: the Eisenhower Network serves needs that no other entity has been able to address. Its services are perceived as uniquely valuable. Specifically, the interviews identify the combination of national perspective with regional knowledge and positioning as the key to Network effectiveness in furthering mathematics and science education reform.

The interviews identified four services the Eisenhower Network provides which clients could not find elsewhere:

- offering a *national perspective* and access to national resources and expertise;
- providing reliable, targeted, and high-quality *professional development on broad reform topics*, in response to regional needs, building capacity at all levels;
- connecting state-level policy makers, regional service providers, and district and school-based educators, leading to *lasting working relationships that cross district, state, and regional boundaries*, thus improving their capacity to do their jobs;
- *serving high-need schools that no one else serves*, those too small or poor to access expertise, or so politically embroiled that they require an unbiased outsider.

1. National Perspective and Support for Mathematics and Science Education Provided

The national perspective of the Network is highly valued. As a state department of education mathematics coordinator from the Appalachia Region said:

> The consortium links us with a sub-set of a national program. We have our state and regional perspectives, but the consortium brings us out of "us" and allows us an opportunity to look at the national picture and how we fit in.
> —*Vignette #74*

A state science coordinator from the Far West Region also highlighted the importance of the Network's regional and national perspective, and went on to illustrate that, positioned as it is beyond local and state politics, with extensive knowledge of regional resources, the Eisenhower Network is able to serve as an effective advocate for mathematics and science reform at the state and regional levels.

When the consortium director was helping us to revise our state's core curriculum, he brought a significant amount of expertise and resources from Western states, as well as a national perspective, and gave us kind-of an opportunity to have someone stand back and look at what work we were doing. The consortium supplies us with direction in looking at science reform with a wider lens than what we typically do here. When we work in our own little circle, it becomes very provincial. Having individuals who are looking at curriculum and resources on a national level is extremely valuable. It provides us with the perspective of a national resource, to make sure that we have things that are, in fact, on that scale. When we need information related to what's transpiring in other places, they're always good with that.

Two years ago, the state legislature made a decision to remove science assessment from the overall assessment picture. Math and reading became the only things that were assessed, and it created quite a stir. But the regional consortium provided our districts with the resources to look at other states, and without any input beyond that, our district-level people went to their legislators, to their professional organizations, and reasoned with legislators so that last year that decision was reversed, and now the end-of-level criterion-referenced test for science has been restored as a result of that. It was quite nice to have someone provide information about what's going on in other states, to inform our district people of what sort of voice should be used to reason with our legislature. Overall, in general I think the consortium has addressed needs that other organizations wouldn't have addressed without consuming much of our own resources to accomplish, and I don't think other organizations would have been consistently there the way the consortium has been.
—*Vignette #75*

In their interviews, many clients also conveyed satisfaction with the advocacy role the Network fills for them at the national level. The Eisenhower Network, they said, provides their district or state a voice at the national level, opening doors to national expertise, which they don't feel they have otherwise, and connecting them to a national network of colleagues.

A state department of education mathematics consultant from the Mid-continent Region explained:

As the consortium staff talk and collaborate with us, I know that they summarize and share the concerns that we have as state supervisors with representatives from the U.S. ED (U.S. Department of Education) and ENC (Eisenhower National Clearinghouse). I think it fills the niche of helping direct some funds and resources to individual state needs. They can bring some national perspective, but be flexible, helping us leverage the national initiatives and tailor them to meet our individual state needs.
—*Vignette #76*

2. Capacity Built through Professional Development

Although the national perspective and advocacy were identified as important, client interviews revealed that the Network is more than a reliable pipeline to the latest information and expertise. The Network watches closely for needs that present themselves across multiple states, and strategically provides regional professional development on critical education reform topics in which states do not have expertise. In this way, the Network builds state and regional capacity, and saves states and other providers from duplicating efforts.

A district curriculum supervisor from the Mid-Atlantic Region, who is a member of a state team, saw her participation as providing unique access to important national topics and experts for herself and teachers from her district:

> The consortium holds its own professional development, such as the TIMSS conferences, which are really valuable, bringing professionals from the whole region together. I would never have known about the TIMSS conferences, and teachers would never have gone. How else would you get a multi-state TIMSS conference going? It would never happen… It's hard for small states to get Bill Schmidt and speakers from AAAS and NSF; we're now more likely to have access to those kind of people. Administrators are better informed. As a science supervisor at the district level, you knew something was coming. I learned about the best, highly recommended resources. The TIMSS conferences constantly stimulated science educators to think about what's important. The consortium should continue, as it does fill that role.
> —*Vignette #77*

A regional professional development provider from the Northeast and Islands Region elaborated on the importance of having access to the consortia expertise on such as topics as strategies for using data:

> Because of their regional role, and being postured with the U.S. Department of Education, the consortia have a solid grasp on some of the issues that we haven't had time to wrestle with. I think there's a need for broad education reform issues to be handled by the consortium. Specifically, to have the consortium staff work with our districts on data was really helpful. I think they found the meat in that to make it practical for districts. There are very few people that have anything of quality to offer around data. There's a screaming cry for it; there's a screaming cry for everybody to use it, but I will tell you that so many of us – and I don't just mean the classroom, I don't just mean teachers, I don't just mean districts, I mean even our organization – we have data everywhere. We have more data than we could go through in ten million years. So, to have an opportunity to have someone help you focus your energies on what is important – not because somebody else said it was important, but what is truly important, for you as an organization, for you as a district, for you as a classroom teacher … no one else is filling that niche.
> —*Vignette #78*

3. Capacity Built by Forging Connections across Boundaries

The theme of appreciation for the Network's external position emerged from the client interviews in multiple forms. As illustrated above, the Network has expertise and political impartiality that helps it to serve as an effective advocate. The regional position of the Network also makes it uniquely effective at crossing organizational and geographical boundaries. The Network connects local and state educators to resources and expertise within their own state and across state lines, and provides a broad perspective and framework that builds capacity by helping people work together to solve common problems.

The director of a NSF-funded technical assistance provider in the Appalachia Region explained how the Network is helpful at the state level:

> The niche filled by the consortium is their ability to convene and connect stakeholders to work collaboratively on systemic reform. The consortium is an organization outside of the state that can come into the state and assist with systemic reform. This is a valuable

resource because they are able to bring a different perspective and to provide a broader view in terms of the national context. The consortium has also been able to connect key organizations within the state in a way that no state-specific organization can do. The state department can't bring all the key players together. They have tried. Only the consortium has been able to do this successfully.
—Vignette #79

A higher education mathematics faculty member and coordinator of a mathematics and science center for professional development in the Mid-Atlantic Region was able to enhance the quality of his professional development, also as a result of the Network's support at the state level:

> The consortium, through the state team, provides necessary frameworks to get people across the state to talk about common problems, share expertise, ideas, help all of us to do a better job of what we do. It lets us do our jobs, but helps us do them better. What the consortium does that no other organization can do is to bring all of the different kinds of organizations and programs to the table and to be unbiased. Also, I know there have been real benefits from the matching money provided by the consortium. Without the matching money, these professional development programs would not have happened. Each year, we are addressing more needs. It is helping us do our job.
> *—Vignette #80*

Brokering collaborations within a state clearly builds capacity, but equally important are the relationships the Network facilitates across state borders. As expressed in many client interviews, sometimes these long-distance collaborations provide support not available to educators within their own states. This was illustrated by the state science supervisor from the Northeast and Islands Region quoted above on page 36 who valued the support he received from meeting with the other Eisenhower Coordinators in his region at a time when they were all struggling with a new challenge, consolidated applications. In his words, the knowledge that he's gained from regional conferences and meetings like those have helped him "leverage change."

Even those with a ready network of colleagues at the state level appreciate the richness that only a regional forum can provide. The Southwest Region higher education faculty quoted above on page 36 expressed a common theme among the client interviews when he said that one of the things he finds wonderful about the consortium is that it involves multiple states. As he says, there is value in making connections with people representing a wide range of capacities, "all at different places in their reform movements." Many interviewees cited such connections across geographical boundaries as adding value to their work in this way.

4. High-Needs Schools Served

Several client interviews provided a district and school-based perspective on the importance of having a regional, external source of support. As they articulate, it is critical to have a provider like the Network who can serve high-need schools without concern for profit or politics. The following statement, shared by a district science supervisor from the Appalachia Region highlights the niche consortia fill by serving resource-poor schools:

> The training that has been provided to the teachers and schools who might not otherwise have been able to afford it has just been unbelievable. A lot of these teachers who work in poorer school districts might not ever get any professional development if it weren't for the consortium and the training they provide.
> *—Vignette #81*

In some cases, the Network's expertise is what qualifies it to work with high-need sites that others do not. The principal investigator of a rural systemic initiative in the Far West Region shared this example:

> The consortium helped to develop and implement the Tribal Innovation Program, a two-year teacher training program that focused on the alignment of curriculum and instruction, standards, and assessment. This program worked primarily with BIA schools and on the reservations. I think it would have been difficult for another organization to work with the Native American districts that we work with. I think a lot of the other organizations either didn't feel competent to work with them, or were restricted for other reasons from working with BIA or native schools. The students who benefited from the teacher training, the alignment and so on, were almost 100 percent Native American. We also had a Hispanic Issues conference, and we also got some support from the consortium on not only preparing that, in fact, staff were very instrumental in acting as a facilitator for organizing that institute, but they also offered support at the institute itself. And from that, we've come up with a series of "Issues" documents that we're putting into a "Proceedings" document that I think would be a very fine guide for science/math reform for Hispanic populations. That guide is being developed now.
> *—Vignette #82*

In addition to direct service by the Network, a district supervisor from the Mid-Atlantic Region illustrated the way state teams and regional collaboration also serve to focus attention on high-need groups:

> As a member of the state team and regional board, I made sure teachers of urban and minority students had a voice. The state meeting helped the team establish a vision for what they wanted to accomplish and developed a plan for how to accomplish goals. I represented urban teachers and the urban child. The team had a pivotal role. We became a political sounding board, picked up what any one organization couldn't do, like a survey on equity issues. Before the team, I hadn't realized the state was so rural. I have a better awareness of the state of education in the state and have established many collegial relationships. I have a support network that I never would have gotten otherwise.
> *—Vignette #83*

A Final Word

The national expertise and regional focus of the Eisenhower Network enables it to promote mathematics and science reform in many ways identified by their clients. The network offers a national perspective and serves as a reform advocate for state and district educators and policy makers. It builds capacity at the regional, state, district, and school-building level by providing targeted, high-quality professional development and technical assistance, by connecting educators across geographical and organizational boundaries, and by serving high-need schools whose needs have not been met effectively by other entities. In these ways, the client interviews indicate that the Eisenhower Network provides unique and valued services to educators at all levels.

Because of its substantial investment in evaluation, the Network can present a clear picture of what has been accomplished in the 1995-2000 grant period. In the coming months, the Network directors will use the findings of this report to shape future study and activities, as a new five-year period of service to the mathematics and science education community is launched.

Appendices

A. Evaluation Methods
B. Client Interview Protocol
C. Audit Report on Interview Methods
D. Sample CCDDS Record Form
E. OERI Performance Indicators for 1999-2000
F. Cross Reference of Interview Vignettes with the Performance Indicators

Appendix A
Evaluation Methods

Evaluation staff representing each of the ten consortia and ENC have worked collaboratively to develop the Consortia and Clearinghouse Descriptive Data System (CCDDS), the participant survey, and the client interview to gather data regarding basic evaluation questions on the operations and outcomes of the Network effort. The guiding evaluation questions were as follows:

- What is the portfolio (i.e., variety, scope) of services offered by the Network?
- Do Network contacts with clients through print and/or electronic media increase annually?
- Does the Network reach substantial numbers of practitioners and policy makers (stakeholders in the educational community) with a variety of services?
- Is the Network targeting LEA clients who are working with at-risk students (e.g., students eligible for free or reduced price lunch)?
- What are the levels and kinds of collaborator involvement in Network activities?
- Are Network activities aligned with National or State content and performance standards and focused on assisting in the implementation of these standards and practices related to their attainment?
- Do clients perceive that the Network provides quality services?
- How are Network products and services used and what are their perceived values/utilities?
- To what extent do the Network's products and services contribute to clients' work?
- What percentage of participants in trainer-of-trainers activities report that they go on to provide professional development or technical assistance based on the technical assistance they receive from the Network?
- What are the impacts of products/services on:
  - Professional practice of service recipients;
  - Student performance at sites in general, as indicated by teacher reports;
  - Student performance at intensive sites in particular, as indicated by student assessment scores;
  - At-risk, underserved students; and
  - Collaboration/networking/partnership activities?
- What mechanisms are in place to assure the quality of consortium products and services?
- What are the apparent strengths of the Network?
- What challenges does the Network face in accomplishing its goals?

Descriptive information about the consortia activities has been collected since October 1995 through ongoing use of the CCDDS. ENC began participating in the CCDDS in January 1998. Evaluative data

regarding the perceived quality and impact of these activities were collected in 1997, 1998, and 1999 using a participant survey, and in 2000 using the client interview protocol. This section summarizes the evaluation methods used.

A. Consortia and Clearinghouse Descriptive Data System (CCDDS)

The CCDDS captures extensive descriptive information documenting client-service activities along a number of dimensions including: major service category, content focus, level of collaboration, method of service delivery, activity duration, number of participants, and client/collaborator organizational affiliation. A sample of a CCDDS record form is shown in Appendix D. Evaluation staff at each consortium and ENC gather the information, enter it into the CCDDS database using FileMaker Pro software, and provide electronic files for cross-consortia aggregation. Data were checked for accuracy and completeness, aggregated, analyzed, and summarized for this report.

B. Client Survey and Interview

To present a more comprehensive picture of the Eisenhower Network program, a companion evaluation strategy was developed to focus on an assessment of quality and impact of the consortia and ENC activities. A pilot survey instrument was designed in 1997 to include a common set of questions for participants regarding training and technical assistance, dissemination, and network building, with some flexibility to tailor the instrument to the needs of each consortium and ENC. For example, organizations were able to include questions regarding their own products and collaborative groups. Based on the results of the pilot test, the survey instrument was revised in 1998 and again for 1999.

To obtain additional client data for the Network's five-year evaluation report, the Evaluation Committee decided to design and conduct client interviews in 2000 instead of administering the annual mail survey. It was felt that this change in methodology would enhance the Network's understanding of client needs and, consequently, its ability to improve services. The interview was designed to address selected OERI performance indicators, as was the survey. However, in contrast to the survey, the interview was expected to yield richer, more in-depth qualitative information that is particularly pertinent to client outcomes/impact and lessons learned during the grant period. Each of the 11 organizations in the Network conducted an interview study. The interview methodology is described below including: (a) interview protocol development and pretesting; (b) sampling guidelines and procedures; (c) interview administration; (d) data entry and analysis; (e) external audit; and (f) report development and quality assurance (refer to Appendix B for samples of interview materials).

Interview Protocol Development and Pretest. The Evaluation Committee formed a Client Interview Subcommittee to design the interview and guide its implementation. The Subcommittee developed the interview protocol and cover letter, sampling guidelines, procedures for data entry, analysis, and reporting, and other aspects of the interview methodology. The full committee reviewed draft versions of materials at key points in the development process. The contact letter and protocol were pretested with a small sample of clients and consortia/clearinghouse staff. At the end of the each pretest interview, the respondent was asked to provide feedback on the clarity of the interview questions, the meaning of key words and interpretation of selected questions, and how the interview could be improved. The protocol was then revised based on this feedback. The final protocol consisted of four sections including items pertaining to background information, training and technical assistance, collaboration and networking, and overall ratings of the consortium and clearinghouse.

Sampling Guidelines and Procedures. A goal was established for each of the 11 participating organizations to complete 16 interviews with a sample of clients involved in Year 5 technical assistance activities and/or collaboration/networking activities. Each sample was to include at least eight clients who are, as described in Indicator 1.3, "teachers, administrators, and providers of professional development who participate in the Consortia's continuing technical assistance" and at least eight clients who are, as described in Indicator 1.9: "participants in consortia partnerships, collaborations, teams, and networks." However, because ENC does not provide training/technical assistance, it was later determined that ENC's sample would include only eight clients from the latter category.

Additionally, staff were asked to keep in mind six sampling considerations which recommended the selection of clients with greater *intensity*, *longevity*, and *breadth* of involvement with the consortium or ENC; and the selection of a broad range of professional *roles*, to include clients who work with *at-risk populations*, and to include professionals from both the *math and science* education communities. These considerations were included to help ensure that respondents had a greater degree of experience with the Network and could therefore give richer, better informed responses and also address the organization's strengths as well as areas for improvement. The sampling considerations were also intended to ensure that the diversity of the Network's client base was adequately represented and that the sample would reflect the work carried out with these different populations. Finally, the sampling guidelines recommended the use of "purposive random sampling" to address the above criteria and considerations within the constraints presented by the small sample size (n=16). Within this general framework, the guidelines provided some flexibility so that each evaluator could tailor the sampling procedures to each organization's circumstances as needed. In general, the samples were selected in one of two ways: (a) by identifying intensive activities in the CCDDS, identifying participants in these activities based on the sampling guidelines and considerations, and then randomly selecting client names from the pool; or (b) asking program staff to nominate clients who would meet the sampling guidelines and considerations and then randomly or purposively selecting client names from the nominations. Several organizations also stratified the sample by Criteria 1 and 2 and/or by state, and some identified extra names for use as replacements in case anyone in the initial sample could not be reached or declined to participate.

Interview Administration. Potential respondents were informed of the interview by an advance letter which was generally sent by email or fax. Most of the respondents were later contacted by telephone to schedule the interview. Respondents were assured of confidentiality and that responses would be reported in aggregate form as specified in the advance letter and/or interview protocol. If quotations were desired for the evaluation report, identifying information would be removed or else clients would be contacted for permission to quote. Interviews were generally conducted by the evaluation staff, although two organizations hired other firms to conduct interviews for them. Interviews were generally conducted by telephone and tape recorded and/or notes were taken by the interviewer. One organization conducted some interviews by phone and some in person, and one organization conducted the study during a Math Science Leadership Team meeting. In the latter case, participants received copies of a reformatted protocol, responded to the questions in writing, and followed up with the interviewer to clarify the written responses.

Across the consortia and ENC, 163 interviews were completed. Eight of the ten consortia completed 16 interviews each, one completed 17, and one completed ten interviews; ENC staff completed 8 interviews. The first interview was completed on September 20th and the last interview was completed on November 25th, 2000. Nearly all of the interviews were completed by the end of October, but one consortium completed all of its interviews during the month of November.

The sample consisted of 163 clients from all 50 U.S. states plus 7 U.S. territories/districts/possessions. Most of the clients interviewed (91%, n=149) first became involved with their regional consortium or the ENC in 1998 or earlier, and approximately half of the overall sample (48%, n=78) had been involved since either 1995, 1996, or 1997. With regards to discipline, nearly half (48%, n=78) of the clients interviewed consider their work to be related to *both* math and science education; 22% (35) consider their work to be related specifically to math education; 29% (47) to science education; and 2% (3) were unsure.

The following table depicts the distribution of interviewed clients among employer affiliations. Overall, the most common employer affiliation is Public School District (40%, n=65). When this category is combined with the Private School District category, the number of clients affiliated with a school district increases to 44% (71) of the overall sample. The next most common employer affiliation is State Agency (20%, n=32); each of the 11 Network organizations interviewed at least one state-agency client. The third most frequent affiliation is Institution of Higher Education (17%, n=28). The remaining 19% consists of a mixture of affiliations such as National Science Foundation (SSI/USI/RSI/LSC), Professional Association, Intermediate/County Education Agency, Business/Industry, Regional Service Provider, and Federal Agency.

Table 1. Affiliations of Interviewed Clients

Employer or Affiliation	*Number of Clients*	*Percentage*
Public School District	65	40.1%
Private School District	6	3.7%
Institution of Higher Education	28	17.3%
Professional Association	5	3.1%
Business/Industry	3	1.9%
Federal Agency	2	1.2%
State Agency	32	19.8%
Intermediate/County Education Agency	4	2.5%
National Science Foundation (SSI/USI/RSI/LSC)	6	3.7%
Regional Service Provider	3	1.9%
Other	8	4.9%
Total Valid Responses	162	100%

The 71 school district-affiliated clients were asked to identify their primary professional role. Among this subset of interviewed clients, the most common school district-affiliated role is Curriculum/Content Specialist (31%, n=22), followed by Administrator (21%, n=15), and Elementary Teacher (18%, n=13). Figure 2 illustrates the extent to which the school district-affiliated clients in the sample are distributed among professional roles.

Table 2. Professional Roles of School District Clients Interviewed (n=71)

Professional Role	*Number of Clients*	*Percentage*
Elementary Teacher	13	18.3%
Middle/Junior High School Teacher	6	8.5%
High School Teacher	7	9.9%
Other Teacher	2	2.8%
Curriculum/Content Specialist	22	31.0%
Administrator	15	21.1%
Other	6	8.5%
Total Valid Responses	71	100%

Approximately half of the school district-affiliated clients that were interviewed serve majority at-risk student populations, as shown by the following findings. 52% (34) of the 66 valid responses from school district clients indicated that at least 50% of students in their school or district are eligible for free or reduced-price lunch. In addition, 52% (36) of the 69 valid responses from school district clients indicated that a majority of their school or district's students are Title I, Native American, Pacific Islander/Native Hawaiian, or LEP. (The number of valid responses was calculated by taking the total number of school district-affiliated clients, 71, then omitting those who were not sure or did not provide a response.)

Data Entry and Analysis. Interview data were generally transcribed from audio tapes and/or generated from the interviewer's notes. The data were entered by each organization into a common data spreadsheet in Excel software. Some staff later imported their data into a common Filemaker Pro database template to facilitate analysis. Evaluation staff reviewed and edited their own data prior to analysis. Each evaluator coded the closed-ended data, referring to specified data coding procedures. The closed-ended data were then aggregated into an Excel spreadsheet so that Network-wide trends could be identified and analyzed. Closed-ended data analysis procedures were primarily descriptive of categorical frequencies for the quantitative data.

Initial plans called for each evaluator to also code the open-ended data according to common data coding procedures. As originally conceived, the subcommittee had intended to compile a set of open-ended data codes after the committee had held some preliminary discussions via an online discussion forum to identify the common themes and rare responses. To allow more time for evaluators to become familiar with their data, the plan was changed to have these conversations take place at an in-person meeting, where the committee worked in teams to distill a set of common response themes--with codes--for each section of the interview. Following the meeting, one person from each team pilot-tested the codes on their own interview data, then the team members re-conferred to make any necessary revisions. One example of a revision was to add sub-thematic codes to signify the quality of impact; another was to add examples and directions. The evaluators then used the complete, revised coding protocol to code their open-ended interview data.

External Audit. A hard copy of each organization's cleaned, coded open-ended data was submitted to an external evaluator who was asked to review and audit the codes for consistency and reliability (refer to Appendix C). The audit revealed that the coders had interpreted and applied the coding scheme in a variety of ways. Based on the external evaluator's recommendations, the committee decided against using the codes quantitatively, but instead to use them as markers to help locate relevant examples for use in the final report. These examples were used to generate client-specific vignettes that illustrate the indicators and the Network's unique role in improving mathematics and science education while also representing the different client populations. Using a set of specified procedures as a guide, each organization developed a set of vignettes from its interview data, and constructed each vignette using a combination of direct quotes and/or paraphrased text from each client interview. Each vignette was intended to represent the salient aspects of a client's interview. Wherever possible, each vignette described the client's context as well as the outcome, population affected, and process by which that outcome was brought about (i.e., the nature of activities in which the client was involved).

Report Development and Quality Assurance. Members of the Evaluation Committee formed subgroups to further review the vignettes, and to incorporate a subset of them into an initial draft of this report. Draft sections were then checked for accuracy, compiled into one document, and edited by several members of the Evaluation Committee. A working draft report was produced and circulated to the evaluators and directors for their review and comment. The review process included the use of a quality assurance review form and followed a procedure that had been developed for prior Network evaluation reports.

C. Value and Limitations of the Data and Lessons Learned

It is important to note that although efforts have been made to apply the database coding system and client interview coding scheme consistently across all consortia and the clearinghouse, there have been some differences in interpretations of the coding scheme over time and across the organizations. The consortia evaluators have taken steps to reduce possible discrepancies by identifying areas of potential misunderstanding, meeting regularly to discuss the coding scheme and its application, and working with consortia and clearinghouse staff to increase uniformity of procedures.

The two data collection methods and related instrumentation were developed for different purposes and varied greatly in scope. Results of using both methods are included in this report, but they may not have the same levels of validity and reliability as means of representing the Network activities and impact. Data have been reported using two different units of analysis: (1) activities, and (2) participants within activities. Both units must be considered to obtain a comprehensive and accurate understanding of the consortia and clearinghouse work.

Data collection for the CCDDS uses program activities as the unit of measurement. Activities are coded according to service category ("what consortia do," e.g., provide technical assistance) and focus area ("what the activity is about," e.g., standards-based instruction), among other characteristics. Each activity may be coded with up to three prioritized service categories and focus areas. For this report, the first-priority service categories and focus areas are represented in all analyses. In some cases the second and third priorities are also included to provide fuller descriptions. Including only the first priority may under-represent the focus areas; including all three may be hard to interpret as it introduces focus-area overlap among activities. In addition, the database does not allow for the identification of unique participants; multiple client contacts may involve the same individuals.

Data collection for the interview uses participants as the unit of measure. The established goal for this year's study was to obtain 16 completed interviews from each of the 10 consortia and eight from ENC (i.e., 168 interviews). The completed interview set was slightly smaller than the goal (n=163). The sample was also designed to be representative of client, collaborator, and participant subgroups as was the previous survey sample. Refer to Appendix B for a version of this year's instrument.

The client interview process presented both strengths and challenges. The evaluators found that it was valuable to talk with clients about their experiences in a detailed manner and about impacts on their work. The themes that emerged from the interviews provide a telling story of what the Network has accomplished over the past five years. The interviews yielded a rich data set with responses that were more thoughtful and in-depth than those collected via the mail surveys of previous years. Moreover, it was easy to see how the responses correlated to the performance indicators. However, because the process was more complex than initially conceived, and evaluators have different levels of experience, skill, and comfort in doing this kind of task, a number of issues were encountered.

With regards to the sampling procedures, it was challenging to incorporate both purposiveness and randomness into the small samples (n=16 per consortium), while addressing multiple criteria and considerations. The participating organizations varied somewhat in their implementation of the sampling procedures. In addition, because the CCDDS is not directly linked to a client database, research was required to obtain some client contact information that was not readily available; identification of names was especially a problem for the one consortium that was not refunded and whose funding period had ended by the time the interviews were conducted. In spite of these limitations, the sampling procedure produced a diverse mixture of clients who are familiar with our work and provided a range of perspectives.

The interview design, much of which consisted of forced choices followed by open-ended prompts and probing for examples, was structured with the goal of obtaining explicit answers that were correlated to the performance indicators. This level of standardization probably also helped reduce interviewer bias across the many interviewers since interviewer training was not provided. The protocol guidelines, use of a common protocol, and common cover letter format were deemed helpful. However, the protocol was considered by some evaluators to be excessively standardized and long, and somewhat awkward to use. The forced choices seemed to place too much emphasis on the quantification of results. Some interviews went smoothly, whereas for others, the protocol caused redundancy and respondent fatigue while also making it difficult for the clients to tell their stories in a natural way. A bias toward positive responses was found; this was perhaps influenced by the protocol's structure, and/or possibly by the nature of the interview administration—some clients may have been hesitant to provide negative feedback in such an interpersonal, one-on-one situation. It was found that the richest data was yielded by Section D of the interview, which contained open-ended questions.

Although it was somewhat helpful to use the customized Excel and Filemaker Pro templates for entering data, the process of entering interview data was found to be, at the same time, cumbersome and time-consuming due to software limitations. In addition, there were variations among the participating organizations with regards to the way the data was captured--some recorded responses in greater detail. The structure of the protocol also led to difficulties in coding and analysis of the open-ended data. The coding process was found to be tedious and not well defined; some codes were redundant or not applicable, and some themes that appeared in the data were not addressed in the codes. The committee found the perspective from the external expert during the quality assurance review process to be helpful and informative.

A number of suggestions were generated for improving the methodology for next time. If the research design was developed further ahead of time, more flexibility could be incorporated into it, and challenges vis-a-vis sampling could be shared and/or sampling plans audited. The development and use of a client database linked to the CCDDS would ease the process of obtaining contact information. It is also worthwhile to consider using a less structured interview protocol with fewer questions, and possibly focus on gaining data from each client about the particular context, process (nature of their involvement), and three greatest impacts. The protocol might also ask open-ended questions first, instead of forced-response questions, thereby giving the interviewer more flexibility and allowing themes to emerge. To facilitate the interviews and provide a better shared understanding of qualitative data analysis, professional development should be provided for evaluators that would familiarize them with the protocol while focusing on strategies for administering the interviews and techniques for analyzing the open-ended data. The consistency/reliability of coding would also be enhanced by developing overarching codes for the entire protocol as a whole group, instead of developing section-specific codes in small groups.

Despite these limitations, the CCDDS and the client interview together comprise a valuable source of information for consideration by Network staff members, sponsors, and partners. The CCDDS documents the work of the consortia and clearinghouse at a program level. The interview provides useful indications of the quality and impact of consortia work as reported by clients as well as the lessons learned during the grant period. The data reported through the interview suggest that it will be an important tool to go beyond the information in the CCDDS and enhance internal evaluation efforts overall.

E=MSC^2 Client Interviews: What can we say about our sample?

SAMPLE SIZE AND GEOGRAPHIC REPRESENTATION

- The final overall sample size is 163 clients.
- Each organization's sample size ranges from 8 to 17, with a mean of 14.8.
- All but two of the organizations completed interviews with at least 16 clients.
- All 50 states plus 7 territories/districts/possessions are represented in the aggregated sample.

LONGEVITY: HOW MANY (NUMBER/PERCENT) OF OUR CLIENTS WERE INVOLVED FOR MORE THAN 1 YEAR? (QA5)

- Among the 163 clients interviewed, the first year of involvement ranges from 1981 (n=1) to 2000 (n=3), with 48% (78) of the clients becoming involved in 1995, 1996, or 1997 (the most frequently cited years, overall).
- 91% (149) of the clients became involved in 1998 or earlier; 82% (133) in 1997 or earlier.
- For each organization, the median response ranges from 1993 to 1998, with all or most of each consortium's clients having been involved since 1998 or earlier.

AT-RISK: HOW MANY (NUMBER/PERCENT) OF THE SCHOOL DISTRICT-AFFILIATED RESPONDENTS WORK/WORKED WITH MAJORITY AT-RISK POPULATIONS?

Of the 71 school district-affiliated clients, the schools or districts of 34 of them (51.5% of the 66 valid cases) have 50% or more students who are eligible for free or reduced-price lunch. The schools or districts of 33 clients (52.2% of the 69 valid cases) have a majority of students who are Title I, Native American, Pacific Islander/Native Hawaiian, or LEP.

AFFILIATIONS: HOW MANY DIFFERENT AFFILIATIONS ARE REPRESENTED IN OUR SET OF RESPONDENTS? (QA2)

- The number of affiliations represented in each organization's data set ranges from 2 to 7, with a mean of 5.1
- The affiliation that is represented by the most organizations (all 11 of them) is State Agency/Level. The least well distributed categories include Professional Association and Federal Agency/Level, each of which is represented by 2 organizations.
- Overall, the employer category with which the greatest number of clients is affiliated is Public School District/Building (65, 40%). When combined with the Private School District/Building category, the number of clients affiliated with a school district increases to 44% (71) of the overall sample.

ROLES: HOW MANY DIFFERENT ROLES ARE REPRESENTED AMONG OUR SCHOOL DISTRICT-AFFILIATED RESPONDENTS? (QA3a)

- The 71 clients affiliated with a school district were asked to identify their primary role. The number of school-district-affiliated roles represented in each organization's data set ranges from 0 to 6, with a mean of 3.6. (Two organizations' samples did not include any school-district affiliated clients.)
- The district-affiliated role that is represented by the most organizations (appearing in 9 consortium data sets) is Curriculum/Content Specialist. The least well distributed role, aside from the "Other Teacher" and "Other" categories, is Middle/Junior High Teacher, appearing in 5 consortium data sets.
- Overall, the roles most commonly cited by school-district-affiliated clients include Curriculum/Content Specialist (22, 31%), Administrator (15, 21%), and Elementary Teacher (13, 18%).

DISCIPLINE: HOW MANY (NUMBER/PERCENT) OF THE RESPONDENTS WERE MATH PEOPLE? SCIENCE PEOPLE? BOTH? (QA1)

Of the 163 clients who were interviewed:

- 78, or nearly half (47.9%) consider their work to be related to both math and science education;
- 21.5% (35) consider their work to be related specifically to math education;
- 28.8% (47) consider their work to be related specifically to science education; and
- 1.8% (3) were unsure.

Within each organization's data set, too, the math and science disciplines are, in general, fairly evenly represented.

Appendix B
E=MSC^2 Client Interview Protocol

Date: _____ **ID Region/Interview #: 02 / __**

Consortium: _____ Interviewer _____

Interviewee Name: _____

Title: _____

Organization _____ State Abbv: __ __ (location of client's school district or organization)

A. Hello, this is _____. I'm with the Mid-Atlantic Eisenhower Consortium. Thank you for taking the time to talk with me today.

B. As you know, this interview will help the Consortium to measure the impact of our two main types of activities: technical assistance (including professional development) and networking and collaboration. Your responses will be used to help the consortium plan future high-quality activities that are relevant to the local, state, and regional needs of its clients.

C. Your responses will be kept confidential and anonymous, and they will be summarized with the responses from other clients and analyzed in a report to the U.S. Department of Education and Congress.

Yes 1
No.....2

D. Okay, let's begin.

Interview start time:

A. BACKGROUND INFO

*(** FOR ALL RESPONDENTS **)*

In this first set of questions, I'd like to confirm your affiliation, as well as the nature of your involvement in consortium activities.

QA1. My first question is, do you consider your work to be related to science education, math education, or both?

Math 1
Science 2
Both 3
NS/DK 9
RA 7

QA2. I understand that your primary employer or affiliation is _NJIT. Is that correct?

(NOTE: Confirm the client's role, as you know it, using the survey options as follows. If your records are incorrect, identify the correct role by reading the list of affiliations.)

School district/building: Private 02
(IF ANY OF THE BELOW, GO TO QA2a)
Institution of Higher Education 03
Professional Association 04
Business/Industry 05
Informal Science 06
Community member or parent 07
Federal Agency/Level 08
State Agency/Level 09
Intermediate/County Education Agency/Level 10
ENC 11
National Science Foundation (SSI/USI/RSI/LSC) 12
Regional Service Provider (RTEC/Lab/etc) 13
Other (SPECIFY) 14
_____
RA 77

QA2a. *(IF NOT WITH A SCHOOL DISTRICT AND NOT A PARENT, COMPLETE THE FOLLOWING QUESTIONS THEN SKIP TO QA5)*

In what state or state(s) do you work?

In a sentence or two, can you tell me briefly about your organization and what you do?

School district/building: Public 01

QA3a. *(IF SCHOOL DISTRICT AFFILIATION)*

I also understand that your primary role is that of a _____. Is that correct?

Teacher: Elementary 11
Teacher: Middle/Jr. High 12
Teacher: High School 13
Teacher: Other (e.g., K-12) 14
Curriculum/Content Specialist (e.g., math supervisor, science resource tchr) 21
Administrator (e.g., principal, vice principal, superintendent) 31
Other (SPECIFY) 41
_____
NA 88
RA 77

QA4a-1. Approximately how many students are enrolled in your school?

(DO NOT READ LIST)

500 or less 1
501-1000 2
1001-1500 3
1501-2000 4
2001 or more 5
NS/DK 9
NA 8
RA 7

QA4a-2. Approximately how many students are enrolled in your district?

(DO NOT READ LIST)

2000 or less 1
2001-4000 2
4001-6000 3
6001-8000 4
8001-10,000 5
10,001 or more 6
NS/DK 9
NA 8
RA 7

QA4b-1. What percentage of students in your school are eligible for free or reduced-price lunch?

(DO NOT READ LIST)

Less than 35% 1
35-49% 2
50-74% 3
75% or more 4
NS/DK 9
NA 8
RA 7

QA4b-2. What percentage of students in your district are eligible for free or reduced-price lunch?

(DO NOT READ LIST)

Less than 35% 1
35-49% 2
50-74% 3
75% or more 4
NS/DK 9
NA 8
RA 7

QA4c-1. Which of the following categories describe the majority of students in your school? *(READ LIST)*

QA4c-1a. Title I
QA4c-1b. Native American
QA4c-1c. Pacific Islander/Native Hawaiian
QA4c-1d. Limited English Proficiency
QA4c-1e. Other special populations (SPECIFY)
_____
_____

QA5. In approximately what year did you first become involved in a consortium-supported activity?

Year __ __ __ __

NS/DK 9999
RA 7777

QA6a. As you know, the Mid-Atlantic Eisenhower Consortium provides professional development, technical assistance, and resources to promote systemic improvements in math and science education.

The Consortium also promotes networking and collaboration among local, state, and regional organizations. By *regional,* we mean within the multi-state region that the Consortium serves.

I understand that you have been involved in *(READ LIST of key consortium activities and/or projects that the client was involved in over the past 5 years),* which have been supported, in part, by the Mid-Atlantic Consortium. Is this correct?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QA6b. Were you involved in any other key consortium activities in the past 5 years?

(IF YES) Please list those activities for me.

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QA6c. *INTERVIEWER: Based on your records and on the client's response to QA6a and b, confirm which sampling criteria the client satisfies. If you are unsure of the client's status, confirm the categories with the client.*

CRITERION 1: Teacher, administrator, and/or provider of professional development who participated in the Consortia's continuing technical assistance.

CRITERION 2: Participant in one of more Consortia partnerships, collaborations, teams, and/or networks.

Criterion 1 1
(GO TO PART B, PG 6)

Criterion 2 2
(GO TO PART C, PG 10)

Both 3
(GO TO PART B, PG 6)

B. TRAINING AND TECHNICAL ASSISTANCE

(FOR RESPONDENTS SATISFYING SAMPLING CRITERION #1**)**

My next few questions relate to your experiences with the professional development and/or technical assistance activities sponsored by the the Mid-Atlantic Eisenhower Consortium. I'd like to ask you several questions about the benefits and other outcomes related to your participation in these activities.

Earlier you stated that you had been involved with the Consortium since [**see QA5**] When answering these questions, please reflect back over the years that you have been involved with the consortium's professional development and/or technical assistance activities.

I'm going to read a list of possible outcomes related to your involvement in professional development and/or technical assistance activities sponsored by the Consortium. After I read each statement, I'd like you to tell me whether or not it is true for you. After we've gone through the list of outcomes, I will go back and ask you to give me one example of each outcome you mentioned. Let's begin.

QB7a. Did the professional development and/or technical assistance you received....

....assist you in implementing or helping others to implement curriculum aligned with National or State standards?

No 2
NS/DK 9
NA 8
RA 7

_____

_____

_____

Yes 1

QB7b. Did it assist you in implementing or helping others to implement instructional practices to attain National and/or State standards?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

_____

_____

_____

QB7c. Did it assist you in implementing or helping others to implement <u>assessment</u> aligned with National and/or State standards?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QB8. Did the professional development and/or technical assistance enable you to improve instructional practices or help others improve their instructional practices in math and/or science?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QB9. Did it help to meet the needs of at-risk, under-represented, and/or underserved students in math and/or science?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QB10. Did it enable <u>you</u> to improve student engagement in math and/or science?

(NA, IF CLIENT IS NOT A TEACHER; REFER TO QA2)

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QB10-e. (EXAMPLE/CLARIFICATION –see QB13)

QB11. Did it enable <u>you</u> to enhance student performance in math and/or science?

(NA, IF CLIENT IS NOT A TEACHER; REFER TO QA2)

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QB11-e. (EXAMPLE/CLARIFICATION –see QB13)

_____

_____

_____

QB12. Can you think of any other important outcomes resulting from your involvement in this professional development and/or technical assistance, whether they are positive or negative?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QB12-a. *(IF YES)* Please describe.

_____

_____

_____

QB13. You've said that your participation in this professional development and/or technical assistance has led to a variety of outcomes. Now, for <u>each outcome</u> you noted, I'd like to go back and ask you to give me <u>one</u> example that illustrates that outcome. In each example you provide, please be specific in describing the way in which the outcome affected you, students, and/or others. I will also ask you to clarify any outcomes that you were unsure about.

(INTERVIEWER: GO BACK TO ITEMS #7-11, and for each outcome that the respondent experienced or was unsure about, ASK FOR EXAMPLES OR CLARIFICATION. Also be sure to probe for the level of impact, such as whether it impacted teachers, students, the organization, etc.)

(SAMPLE PROBE FOR "YES" RESPONSES: "You stated that your involvement in the [**Consortium's**] professional development and/or technical assistance activities helped to improve instructional practices. Can you tell me <u>whose</u> instructional practices were improved? In what ways have instructional practices changed as a result? How have these changes benefited you, students, or others? Please give specific examples.")

(SAMPLE PROBE FOR "NOT SURE" RESPONSES: "You stated that you were unsure whether your involvement in the [**Consortium's**] professional development and/or technical assistance activities helped you to improve instructional practices. Can you please explain why you were unsure?")

QB14. Of all the outcomes you described as a result of your involvement in this professional development and/or technical assistance, which *one* outcome was the most significant, in your opinion?

QB14a. Why was it the most significant?

Curriculum alignment 01
Instructional alignment 02
Assessment alignment.....03
Improve instruction.....04
Meet needs of at-risk, etc.....05
Improve student engagement 06
Enhance student performance.....07
Other (SPECIFY).....08

NS/DK 99
NA 88
RA 77

QB15. Did this professional development and/or technical assistance meet your expectations?

QB15a. In what ways [DID IT]/[DID IT NOT] meet your expectations?

Yes 1
No.....2
NS/DK 9
NA 8
RA 7

If client also satisfies Criterion 2 (i.e., participates in one or more Consortium partnerships, collaborations, teams and/or networks): .....*GO TO PART C, PG 10*

If not: .....*GO TO PART D, PG 14*

C. COLLABORATION AND NETWORKING

(FOR RESPONDENTS SATISFYING SAMPLING CRITERION #2**)**

This set of questions relates to the nature of and outcomes related to your collaboration and networking with the consortium. First, I'd like to ask you about the nature of your collaboration with the [**Consortium**].

Earlier you stated that you had been involved with the consortium since [**year**]. When answering the following questions, please reflect back over the years that you or your organization has collaborated with the consortium.

QC16a. Can you briefly describe the nature of this collaboration? For example, please describe whether this collaboration involved planning, product development, provision of space or staff time, or other things.

(DESCRIBE BELOW)

Yes 1
No 2
NS/DK 9
NA 8
RA 7

_____

_____

QC16b. Did different organizations contribute different things?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QC16b-e. Can you give me an example?

_____

_____

Now, I'm going to read a list of possible outcomes related to your collaboration with the [**Consortium**]. After I read each statement, I'd like you to tell me whether or not it is true for you. After we've gone through the list of outcomes, I will go back and ask you to give me one example of each outcome you mentioned. Let's begin.

QC17a. Did your collaboration with the [**Consortium**] strengthen relationships?

QC17a-e. (EXAMPLE/CLARIFICATION –see QC18)

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QC17b. Did your collaboration with the [**Consortium**] increase coordination in providing services?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QC17b-e. (EXAMPLE/CLARIFICATION –see QC18)

QC17c. Did it increase access to resources?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QC17c-e. (EXAMPLE/CLARIFICATION –see QC18)

QC17d. Did it leverage resources and efforts for greater impact?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QC17d-e. (EXAMPLE/CLARIFICATION –see QC18)

QC17e. Did your collaboration with the [**Consortium**] inform policy decisions at any level?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QC17e-e. (EXAMPLE/CLARIFICATION –see QC18)

QC17f. Did it assist you in carrying out your work more effectively?

QC17f-e. (EXAMPLE/CLARIFICATION –see QC18)

Yes 1
No 2
NS/DK 9
NA 8
RA 7

_____

_____

QC17g. Can you think of any other outcomes resulting from your collaboration with [**Consortium**], whether they are positive or negative?

QC17-g. *(IF YES)* Please describe.

Yes 1
No 2
NS/DK 9
NA 8
RA 7

_____

_____

QC18. You've said that your collaboration with [**Consortium**] has led to a variety of outcomes. Now, for <u>each outcome</u> you noted, I'd like to go back and ask you to give me <u>one</u> example that illustrates that outcome. In the examples you provide, please be specific in describing the way in which each of these outcomes affected you, your organization, or the schools you work with. I will also ask you to clarify any outcomes that you were unsure about.

(INTERVIEWER: GO BACK TO ITEMS #17a-f, and for each outcome that the respondent experienced or was unsure about, ASK FOR EXAMPLES OR CLARIFICATION. Also be sure to probe for the level of impact, such as whether it impacted the respondent, his/her organization, the schools with which the respondent works, etc.)

(SAMPLE PROBE FOR "YES" RESPONSES: "You stated that your collaboration with the [**Consortium**] strengthened relationships. Between what people, groups, or organizations were relationships strengthened? In what ways? How did this benefit you, your organization, or others with whom you work? Please give specific examples.")

(SAMPLE PROBE FOR "NOT SURE" RESPONSES: "You stated that you were unsure whether your collaboration with the [**Consortium**] helped to strengthen relationships. Can you please explain why you were unsure?")

QC19. Of all the outcomes you described as a result of your collaboration with the consortium, which *one* outcome was the most significant, in your opinion?

QC19a. Why was it the most significant?

Strengthen relationships.....01
Increase service coordination.....02
Increase access to resources.....03
Leverage resources/efforts.....04
Inform policy decisions.....05
Help you work more effectively 06
Other (SPECIFY).....07

_____

NS/DK 99
NA 88
RA 77

_____

_____

QC20. Did your collaboration with the consortium meet your expectations?

QC20a. In what ways [DID IT]/[DID IT NOT] meet your expectations?

Yes 1
No.....2
NS/DK 9
NA 8
RA 7

_____

_____

QC21. Has your collaboration with the consortium provided you, your organization, your state, and or teachers or students with benefits that would not have been afforded them otherwise?

QC21a. Please explain.

Yes 1
No.....2
NS/DK 9
NA 8
RA 7

_____

_____

GO TO PART D, PG 14

D. OVERALL RATING OF THE CONSORTIUM

(FOR ALL RESPONDENTS**)**

The next few questions focus on what you perceive to be the consortium's role and the quality and impact of its work overall.

QD22. In general, what niche do you feel the consortium fills in your region, if any?

QD23. Would you say that the consortium addressed any needs that would have been difficult or impossible for another organization to address?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

QD23a. Please explain.

QD24. Overall, when you reflect on the Consortium's role, what other impact or impacts, if any, did its work have on mathematics and/or science education?

QD24a. *(IF ADDITIONAL IMPACT IS MENTIONED BY CLIENT)* In what ways do you feel the Consortium's work contributed to this impact?

QD25. Is there any way in which the services and/or products of the Consortium have not met your expectations?

(IF YES) In what ways did they not meet your expectations?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

_____

_____

(IF NOT SURE) Please explain.

QD26. How can the Consortium improve its services and/or products in the future, to better meet either your own professional needs, or the needs of your organization, school, district, state or region?

(PROBE to determine at what level this need exists—professional, organizational, school, district, state, or regional level)

QD27. Would you like to share any additional comments, either positive or negative, about [**Consortium**], its services, and/or products?

QD27a. (IF YES or NOT SURE) What additional comments do you have?

Yes 1
No 2
NS/DK 9
NA 8
RA 7

_____

_____

THESE ARE ALL THE QUESTIONS I HAVE FOR YOU.
THANK YOU FOR YOUR TIME.

Interview ending time: _____

ROSENBLUM BRIGHAM ASSOCIATES
220 West Rittenhouse Square, #16D • Philadelphia, PA 19103 • (215) 735-4159 • FAX (215) 735-5767

1/12/01

To: Keith Kershner et al.
From: Sheila Rosenblum
Re: Review of Coding

Introduction

This is a memorandum/report of findings from an audit of the coding of open-ended responses in interviews conducted in each of the Mathematics/Science Regional Consortia. Interviews were conducted in each of the ten regions and by the ENC. Each of the 11 organizations conducted between 14 and 17 interviews. The audit was based on a review of ten sets of interviews; materials from one region arrived too late to be included in the audit process. The purpose of the audit was to review a sample of coded responses to 32 open-ended questions, and to assess the quality of the coding process.

The Audit Process

The following procedures were used to audit the coded responses:

1) A sample of 10% of the responses (codes) for each open-ended question, in each of the sections B,C,and D were reviewed, with the modifications noted below.

2) At least one response for each consortium for each question was included, even if it didn't fall in the 10% sample.

3) For questions where there were much fewer responses than others, 1/8 rather than 1/10 of the responses were reviewed.

4) For each question, the times the code was found to be acceptable was counted; and the times there was disagreement, or the code was questioned was counted. The second group (questions or disagreements), included instances where the code was disputed (seen as incorrect), or where the code(s) were fine, but were not exhaustive enough, and there important codes left off. The percentage if codes where there was agreement, vs. questioned or disagreed was calculated for each of three sections (B, C, and D). However, the percentage of disagree vs. non-exhaustive was not calculated.

Findings

In conducting the audit, several factors became evident:

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1) Descriptions of examples (the open-ended responses) varied greatly in detail and in length, ranging from a phrase, to a sentence, to several sentences, to a paragraph, to 1/2 page to a full page.

2) These probably varied in part by the nature of the interview (some probed more intensely than others, as is documented in the transcription), and the nature of the interviewer's recording.

3) Interviews were in some cases transcribed and not edited. Some are hard to understand because words were not clear, or not heard well, or misunderstood. Also, they were not edited to make more comprehensible to a reader.

4) In some cases, the interview responses did not make sense, were somewhat gibberish, or were possibly placed as a response to a wrong 'question.

5) Some coders were more exhaustive in their coding than others, i.e., including several appropriate response codes in a paragraph rather than one or just a few.

6) Different committees developed codes for each of the three sections of the interview, sections B, C, and D. It seemed liked similar concepts were coded or treated differently across the three sections. Some gave clearer definitions than others. This may have added to the confusion and possible frustration with the task.

7) It seemed likely that there were inconsistencies in how coders interpreted the meaning and definition of some codes. This may have been exacerbated by the possibility that there was overlap and potential duplication in some of the codes, (or unclear definitions emphasizing the differences between them) and so coders varied in the codes that they chose. For example, B-06 and B-08, C-13 and C-15 among others, had overlapping definitions; Further, it was sometimes also unclear (to the coder and to the reviewer) whether the code referred to a condition facilitating the successful outcome (e.g., facilitating the outcome of collaboration) or whether it was the subsequent outcome (e.g., the outcome of collaboration). Thus the codes may mean different things to different coders.

Coding for a sample of responses to each question was reviewed within each section (B, C, and D). The percent of the reviewer's agreement with the codes was approximately 65%, and was very similar across the three sections. Approximately 35% of the time, the reviewer either disagreed with the code, or felt that additional codes were also indicated, i.e., the coding was not complete enough.

All of these issues, especially the lack of standardization in approach to the coding and the levels of completeness of the examples had implications for the quality, scope, and potential validity and reliability of some of the coding.

Implications and Recommendations

The implications of these findings depend on the ways in which the codes will be used. If the codes were to be used in a quantitative analysis, the issues outlined above and the level of reliability of the codes appears troublesome, and this reviewer would have serious reservations about the credibility of such quantitative analyses. However, if the codes were to be used to select potential narrative examples to illustrate a finding or outcome, or to select a particular interview for review for use in a vignette, then the level of reliability is less serious. The analyst or writer could select, and if the example is not so illuminating, one could select other examples!

The following recommendations are offered if the consortia choose to code narrative responses in the future:

- Be more specific about the definitions of the codes, and review for redundancy and overlap;
- Check for consistency of codes across sections;
- Conduct careful training sessions for codings, to insure understanding and consistency;
- Conduct a reliability check of the codes for a sample of responses. Have two people code the same sample of responses, and have them discuss and reconcile their differences, if any. This could also be part of the training.

Please call if you have any questions about this memo.

Date: _____ # _____

MID-ATLANTIC EISENHOWER CONSORTIUM
ACTIVITY DESCRIPTION FORM

1. Activity Title: _____

2. Activity Description: _____

_____

3. Staff Liaison: _____

4. Client contact (if applicable) _____ Organization: _____
Client phone email: _____

5. Dates of this activity: _____ to _____

6. States served (check all that apply): DE ❑, DC ❑, MD ❑, NJ ❑, PA ❑, Region-wide ❑, Nation-wide ❑

7. Location of Activity: _____

8. Is this a continuing activity: Yes ❑ No ❑ If yes,
Is this the first report? Yes ❑ No ❑
Date the continuing activity began: _____
Date the activity is *expected* to conclude: _____

9. **Major Service Category** ***(You can rank up to 3)***
- ❑ Training
  _____ check here if training is for trainers
- ❑ Technical assistance
- ❑ Information dissemination (see Publications List)
- ❑ Network building
- ❑ Other (describe) _____

10. **Content Focus Area** ***(You can rank up to 3)***
- ❑ Assessment
- ❑ Standards
- ❑ Curriculum frameworks
- ❑ Programs and curricula
- ❑ Professional development
- ❑ Technology
- ❑ Collaboration and communication
- ❑ Equity
- ❑ Community Outreach
- ❑ Evaluation
- ❑ Other (describe) _____

11. **Contact Methods** ***(Check all that apply)***
- ❑ In-person
- ❑ Telephone
- ❑ E-mail electronic (web, listserv)
- ❑ Print
- ❑ Audiotape
- ❑ Videotape
- ❑ CD-ROM
- ❑ Other computer disks
- ❑ Teleconference
- ❑ Other (describe) _____

12. **Intensity**
Number of hours _____ (1 day=6 hours)
Total Number of participants _____

13. What did the Consortium add or contribute to the activity (value added)? _____

_____

_____

_____

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(over)

14. **Participant Affiliation** ***(Number of each)***

Check box if collaborator		***and specify organization names:***
_____ Federal agency level	❑	_____
_____ SEA state agency level	❑	_____
_____ Intermediate agency level	❑	_____
_____ Local district (public)	❑	_____
_____ Local district (private)	❑	_____
_____ IHE	❑	_____
_____ Professional association	❑	_____
_____ Business industry	❑	_____
_____ ENC	❑	_____
_____ Regional service providers	❑	_____
_____ NSF	❑	_____
_____ Informal science entity	❑	_____
_____ Community members parents	❑	_____
_____ Other	❑	_____
_____ Unknown		
_____ TOTAL, must equal participants		

15. **Breakout of Local District, Total** = _____*

Level
- _____ Early childhood
- _____ Elementary
- _____ Middle/Jr. High
- _____ Senior High
- _____ District level
- _____ Other
- _____ Unknown
- Total _____*

Role
- _____ Administrator
- _____ Teacher
- _____ Curriculum specialist
- _____ Other
- _____ Unknown
- Total _____*

At-risk
- _____ Yes
- _____ No
- _____ Unknown
- Total _____*

Type of at-risk environment (check all that apply)
- ❑ Qualify for free or reduced price lunch
- ❑ Title I
- ❑ Native American
- ❑ LEP ELL
- ❑ Rural

**All totals must be equal*

16. What were the outcomes of the activity? How will participants and their students benefit?

_____

_____

_____

_____

_____

(November 2, 2000)

Appendix E
OERI Performance Indicators for 2000

Quantitative indicators of performance related to consortia and clearinghouse activities have been under development by the U.S. Department of Education for the last few years. Network staff have had opportunities for input into the development process. A set of key indicators was initially submitted in the Department's overall FY 1999 Annual Plan. Subsequently, the set was expanded, conveyed to the Network, and later refined by the Department with input from the Network.

While the Performance Indicators are still subject to revision, and were not designed specifically to match Network evaluation efforts, the data reported herein provide some results that speak to the indicators. This section presents an overview of results selected to represent performance in the 2000 fiscal year across indicators.

1. **Overview.** Table 4 gives the overview across indicators. On the 11 indicators presented here, the benchmark standards were met or exceeded for 9. Four of these benchmarks utilized data for 2000 from the CCDDS: 1.2, 1.7, 1.8, and 2.1. Measurement of indicator 1.5 on student test scores has not yet been implemented. The benchmark of 60 percent intensive activities for indicator 1.2 was not met, as only 51 percent of activities met the benchmark. Measurement of the remaining six indicators is dependent on quantitative data obtained from clients. Such data were not available for 2000 because the client interviews were not designed to yield data that would meet reliability and validity standards for quantitative analysis. These interviews were designed for in-depth qualitative use. Thus, the results reported for these indicators in Table 4 was taken from the 1999 Client Survey data, which has also been reported for 1999.

2. **Individual Indicators.** Each Performance Indicator is described below, along with the benchmark for desired performance and the pertinent results derived from the CCDDS and Participant Survey.

- *1.1—Alignment with standards.* At least 80% of participants in consortia technical assistance activities (including training) will report that the content is explicitly aligned with national or state standards and/or is focused on assisting in the implementation of standards. Results: Over 98% of survey respondents indicated in 1999 that the content of training or technical assistance was moderately or extensively aligned with standards. (See Table in June 28, 2000 report.)

- *1.2—Intensity of technical assistance.* At least 60% of consortia technical assistance (includes training) will be 12 hours or more in duration. Results: 51% of CCDDS-reported activities were 12 hours or more in length (Table 3).
- *1.3—Improvement in participants' practice.* At least 80% of the teachers, administrators, and providers of professional development who participate in the consortia's continuing technical assistance will report improvement in their practice. Results: Over 95% of survey respondents indicated in 1999 that the training or technical assistance received was moderately or extensively useful in improving their instructional practice. (See Table 16 in June 28, 2000 report.) Note: Respondents represent all technical assistance; the "continuing" subset was not representative of the CCDDS-reported total of participants involved with intensive technical assistance or training.

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Table 4

Performance Indicator Results for October 1999-September 2000

	Indicator	Standard	Data Source	Results	Met
1.1	TA* aligned with standards	80% of participants report	Survey	99%	✓
1.2	TA intensity	60% of activities are 12+ hours	CCDDS	51%	X
1.3	Intensive TA improvements in practice**	80% of participants report	Survey	96%	✓
1.4	Intensive TA improvements in student performance**	80% of participants report	Survey	94%	✓
1.5	Intensive sites' improvements in student scores	Measurable improvement	School or district assessments	NA	NA
1.6	Training of trainers produces training of others	80% of participants report	Survey	83%	✓
1.7	Intensive TA targeted on at-risk	70% of participants report	CCDDS	81%	✓
1.8	All activities involve collaborators	80% of all activities	CCDDS	90%	✓
1.9	Impact of collaboration as value added	80% of team and network members report	Survey	85%-93%	✓
2.1	Dissemination of resources	10% annual increase in print and/or Web hits	CCDDS	10.4% in Web + print total	✓
2.2	Utility of products***	50% of participants report	Survey	77% and 82% of products	✓

*TA includes technical assistance and training.

**Indicator refers only to intensive subset of activities (1.2), but results here are for all activities.

***Results are described in terms of the percentage of Consortia and ENC products that contributed "moderately" or "significantly" to improving the work of recipients.

- *1.4—Improved student performance.* At least 80% of teachers who participate in the consortia's continuing technical assistance will report improvements in student engagement and/or student performance. Results: At least 94% of survey respondents reported in 1999 that the training or technical assistance received was moderately or extensively useful in improving student engagement and student performance. (See Tables 14 and 15 in June 28, 2000 report.) Note: Respondents represent all technical assistance; the "continuing" subset was not representative of the CCDDS-reported total of participants involved with intensive technical assistance or training.
- *1.5—Improved student performance in sites that receive intensive assistance from consortia.* Assessment scores of students who have been enrolled for at least one year in a mathematics and science program will show improvement. Results: During the current reporting period, data were not yet available for this indicator. The Network plans to collect achievement data through intensive site work in the Middle School Math Project and other efforts.
- *1.6—Participation by individuals who will assist or train others.* At least 80% of participants in consortia training-of-trainers activities will go on to provide professional development or technical assistance based on the technical assistance they received from the consortia. Results: Over 82% of survey respondents who participated in a training-of-trainers activity reported in 1999 providing assistance to others as a result. (SeeTable 13 in June 28, 2000 report.)
- *1.7—Targeted services.* At least 70% of the district and school staff who participate in the consortia continuing technical assistance will work in districts or schools with a majority of students who are Title I eligible. Results: 81% of the LEA participants in intensive technical assistance activities indicated working in schools serving at-risk students (Table 3). (This percentage excludes 1,927 participants whose status was unknown; if these were included, the percentage would be lower, not meeting the benchmark.)
- *1.8—Volume of collaboration.* At least 80% of consortia activities will include collaborators from one or more stakeholder groups in planning, product development, and/or service delivery. Results: 90% of all activities involved at least one collaborator (Table 3).
- *1.9—Impact on collaboration and networking.* At least 80% of members of consortia teams and networks will report that value was added in one or more of the following ways: strengthening relationships; increasing service coordination; increasing access to resources; or leveraging resources. Results: In 1999, over 92% reported strengthened relationships among collaborators, 88% increased coordination in providing services, 92% increased access to resources, 87% resources and efforts leveraged for greater impact, and 92% collaboration assisted in carrying out the work more effectively. (See Tables 32-36 in June 28, 2000 report.)
- *2.1—Dissemination.* The total number of consortia contacts with customers by print and/or "hits" on consortia electronic sites will increase by 10% annually. Result: This indicator has been met and exceeded. Print contacts increased from 125,212 to 129,901, while electronic contacts increased from 3,328,846 to 3,684,833. Thus, there was a net combined increase of 360,736, or 10.4%.
- *2.2—Utility.* A majority of the recipients of consortia and ENC products and resources will report that they have contributed to improving their work. Result: This indicator has been met. A majority of the recipients of consortia and ENC products and resources reported in 1999 that they have contributed to improving their work. As reported in Table 23 of the June 28, 2000 report, over 77% and 82% of the products for the consortia and ENC respectively contributed "moderately" or "significantly" to improving the work of recipients.

Appendix F
Cross Reference of Interview Vignettes with the Indicators
National Network of Eisenhower Regional Consortia and Clearinghouse

NOTE: In Sections III and IV of this report, each quotation, or vignette, has been assigned a unique identification number. These numbers range from #1 (on the first page of Section III) to #83 (on the last page of Section IV). The ID numbers are referenced below each vignette in the report, as well as in the following table. If a vignette provides anecdotal data related to multiple indicators, its ID number appears in all relevant locations in the table. (Two other vignettes—1 and 78—do not relate directly to a specific indicator and are thus not included in this table.)

	Vignette ID Numbers			
OERI Indicators	*Section IIIA:* Training and Technical Assistance	*Section IIIB:* Dissemination	*Section IIIC:* Collaboration and Networking	*Section IV:* Conclusions
Technical Assistance				
1.1: Alignment with standards	6, 8, 9, 10, 19, 23, 24, 25, 28, 30, 40	--	67	--
1.2: Intensity of technical assistance	--	--	--	82
1.3: Improvements in participants' practice	2, 3, 4, 5, 6, 7, 8, 10, 11, 12, 13, 14, 15, 17, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 30, 31, 33, 34, 36, 37, 40, 42	--	58, 60	--
1.4: Improved student performance	2, 14, 15, 16, 17, 18, 19, 30, 42	--	--	--
1.5: Improved student performance in sites that receive intensive assistance from Consortia.	2, 14, 15, 18, 19	--	--	--
1.6: Participation by individuals who will assist or train others	21, 22, 29, 31, 32, 33, 35, 37, 38, 39, 40, 41, 42	--	--	--
1.7: Targeted services	2, 12, 14, 15, 19, 27, 28, 42	--	61	81, 82, 83
1.8: Volume of collaboration	--	--	--	--
1.9: Impact on collaboration and networking	8, 21, 26, 37	56	57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73	74, 75, 76, 77, 79, 80, 83
Dissemination				
2.1: Volume of dissemination	--	44	72	--
2.2: Quality of dissemination	--	43, 44, 46, 47, 48, 49, 51, 53, 54	--	--
2.3: Utility of dissemination	--	43, 45, 46, 49, 50, 52, 53, 55, 56	71	75

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